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ABSTRACT

The report provides an account of how the U.S. Office of Education's discretionary vocational education research program for fiscal year 1974 was planned and implemented under the administration of the new Bureau of Occupational and Adult Education and its component new Division of Research and Demonstration. The report contains basic information on: legislative and regulatory provisions; the planning and procedures leading to the determination of the program priority areas for fiscal year 1974; the processes used to implement the award program for this year; and the award outcomes in terms of an overview of the purposes and expected results of the funded projects, abstracts of the individual projects, and identification of several special projects of national significance. The bulk of the document is made up of abstracts of funded projects in the following areas: (1) curriculum studies, (2) disadvantaged, handicapped, and minority, (3) alternative work experiences, (4) guidance, counseling, placement and followup, and (5) manpower information and systems. (Author/MW)

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APPLIED RESEARCH PROJECTS SUPPORTED IN FY 1974
UNDER PART C OF THE
VOCATIONAL EDUCATION AMENDMENTS OF 1968

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APPLIED RESEARCH PROJECTS SUPPORTED IN FY 1974
UNDER PART C OF THE
VOCATIONAL EDUCATION AMENDMENTS OF 1968

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BUREAU OF OCCUPATIONAL AND ADULT EDUCATION
WILLIAM F. PIERCE, DEPUTY COMMISSIONER

DIVISION OF RESEARCH AND DEMONSTRATION
HOWARD F. HJELM, DIRECTOR

JUNE 1974

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PREFACE

Vocational education has been of special interest and concern to the Federal Government for over 100 years. It has consistently recognized the importance of vocational education in terms of preparing individuals in occupational competency as well as producing skilled persons to meet national and state manpower needs.

The number of persons involved in vocational education has expanded tremendously during the past decade and the trend is continuing. An increasing percentage of youth at the elementary and secondary levels are opting for vocationally oriented curriculums. At the post-secondary level, institutions that provide occupational education are bulging with students who desire occupational training in preparation for employment.

Technological advances, increasing industrialization, expansion of employment in the service industries, and changing national manpower requirements necessitate up-to-date planning and management information for vocational education. Decision oriented studies, curriculum development, and demonstration programs are needed to improve and extend existing vocational education programs so that national concerns and individual needs are met. Vocational education research and demonstration programs are required to produce information and materials for the complex vocational education systems that exist in the 56 States and Territories.

Such information and material must be directly relevant and usable by the planners and practitioners in vocational education.

This report provides an account of how the U.S. Office of Education's discretionary vocational education research program for fiscal year 1974 was planned and implemented under the administration of the new Bureau of Occupational and Adult Education and its component new Division of Research and Demonstration.

Howard F. Hjelm, Director
Division of Research and Demonstration
Bureau of Occupational and
Adult Education
U.S. Office of Education

FOREWORD

The Vocational Education Act authorizes HEW's Office of Education to administer a vocational education research program. Three parts of the Act are coordinately managed to form the program. Part C authorizes support for research, including nearly all of the functions of the R&D enterprise. Part D authorizes support for exemplary demonstrations, and Part I authorizes support for curriculum development, and related activities.

This is a report of the U.S. Commissioner of Education's discretionary vocational education research program authorized by Part C of the Act, as planned and carried out for fiscal year 1974. Half of the funds appropriated for Part C are given directly to the States and Territories on formulae bases for _their_ discretionary use. The States' half of the appropriated funds may be used to support up to 75 percent of the cost of Research Coordinating Units and up to 90 percent of the cost of projects. The fiscal year 1974 appropriation for the State grant portion of Part C was $9,000,000. The portion for the U.S. Commissioner of Education's discretionary funding may be used to make grants and contracts for supporting applied and developmental studies, as well as curriculum development, demonstrations, evaluations, and dissemination. Cost sharing is required for Part C projects.

The Commissioner's fiscal year 1974 appropriation of $9,000,000 was awarded to 93 projects resulting from a competitive grant announcement made in the Federal Register on December 5, 1973. This announcement identified five priority areas for the receipt of applications. Under Part C, applications submitted to the U.S. Office of Education by local educational education agencies require approval by the State Board for Vocational Education; applications from other sources do not. Eligible applicants include all parties except individuals, including all public agencies and institutions and all private organizations and institutions, both non-profit & profit-making.

In addition to the Office of Education grants and contracts resulting from the announcement of the competitive awards, a limited amount of funds was committed to the support of a few special projects of national significance.

This report contains basic information on the legislative and regulatory framework applying to the Part C research program; the planning and procedures leading to the determination of the program priority areas for fiscal year 1974; the processes used to implement the award program for this year; and on the award outcomes in terms of an overview of the purposes and expected results of the funded projects, abstracts of the individual projects, and identification of several special projects of national significance.

The effective work of the staff of the Research Branch in accomplishing the tasks described herein, and many related ones, is hereby acknowledged with special thanks. They are Velma Brawner, Mario F. George, Frances Hamilton, David H. Pritchard, and Jack A. Wilson.

It is our intention that all interested persons and organizations be informed of the purposes, priorities, procedures and funding outcomes of this important national research program for 1974. As one result, it is anticipated that wider interest in, and contributions to, the benefits realizable from the program will accumulate for future years.

Glenn C. Boerrigter, Chief
Research Branch
Division of Research and Demonstration
Bureau of Occupational and
Adult Education
U.S. Office of Education

VOCATIONAL EDUCATION RESEARCH PROGRAM

I. Legislative-Regulatory Provisions

The Vocational Education Amendments of 1968, Title I, declares -

> It is the purpose of this title to authorize Federal grants to States to assist them to maintain, extend, and improve existing programs of vocational education, to develop new programs of vocational education, and to provide part-time employment for youths who need the earnings from such employment to continue their vocational training on a full-time basis, so that persons of all ages in all communities of the State--those in high school, those who have completed or discontinued their formal education and are preparing to enter the labor market, those who have already entered the labor market but need to upgrade their skills or learn new ones, those with special educational handicaps, and those in postsecondary schools--will have ready access to vocational training or retraining which is of high quality, which is realistic in the light of actual or anticipated opportunities for gainful employment, and which is suited to their needs, interests, and ability to benefit from such training.

Within Title I of the Act, Part C - Research and Training in Vocational Education - provides -

> Sec. 131. (a) From 50 per centum of the sums available to each State for the purposes of this part the Commissioner is authorized to make grants to and contracts with institution of higher education, public and private agencies and institutions, State boards, and, with the approval of the appropriate State board, to local educational agencies in that State for the purposes set forth in section 132, except that no grant may be made other than to a nonprofit agency or institution.
>
> (b) The remaining 50 per centum of the sums available to each State for the purposes of this part shall be used by its State board, in accordance with its State plan.....

Regulations pertaining to the administration of the research program under Part C of the Act are contained in the General Provisions for Programs - Administrative and Fiscal Requirements - (45 CFR Part 100a) as published in the Federal Register on November 6, 1973 (38 F.R. 30654, 30662). Certain additional regulations pertaining specifically to the Part C research program are contained in 45 CFR Part 103 - Research and Training, Exemplary, and Curriculum Development Programs in Vocational Education - as amended by the General Provisions on November 6, 1973.

Regulation 100a. 26 - Review of Applications - sets forth basic procedures and criteria to be applied to review of applications received under the vocational education research program, among others. It reads as follows:

> (a) The Commissioner, prior to disposition of applications for grants or contracts, shall have discretion to obtain the review of a panel of experts (except where review by such a panel is required by statute). Any such review will be in addition to the review of an application by the Commissioner in accordance with such procedures as he may establish.
>
> (b) Review by the Commissioner and by the panel of experts will take into account the following factors (in addition to such other criteria as may be prescribed by statute or regulation):
>
> (1) The need for the proposed activity in the area served or to be served by the applicant;
>
> (2) Relevance to priority areas of concern as reflected in provisions contained in the applicable Federal statutes and regulations;
>
> (3) Adequacy of qualifications and experience of personnel designated to carry out the proposed project;
>
> (4) Adequacy of facilities and other resources;
>
> (5) Reasonableness of estimated cost in relation to anticipated results;

(6) Expected potential for utilizing the results of the proposed project in other projects or programs for similar educational purposes;

(7) Sufficiency of size, scope, and duration of the project so as to secure productive results; and

(8) Soundness of the proposed plan of operation, including consideration of the extent to which:

(i) The objectives of the proposed project are sharply defined, clearly stated, capable of being attained by the proposed procedures, and capable of being measured;

(ii) Provision is made for adequate evaluation of the effectiveness of the project and for determining the extent to which the objectives are accomplished;

(iii) Where appropriate, provision is made for satisfactory inservice training connected with project services; and

(iv) Provision is made for disseminating the results of the project and for making materials, techniques, and other outputs resulting therefrom available to the general public and specifically to those concerned with the area of education with which the project is itself concerned.

II. Determining Research Priorities for Fiscal Year 1974 Program

Early in 1973, the Deputy Commissioner for Occupational and Adult Education established Bureau-wide planning procedures which included determining the priorities for the vocational education research program of the Bureau for fiscal year 1974.

One major dimension of this planning process involved establishment of broad goals for the Bureau as a whole, and of goal-responsive objectives for main program components of the Bureau. Among the objectives established for the Bureau's Office of Adult, Vocational, Technical, and Manpower Education were the following ones to which the vocational education program for fiscal year 1974 was committed.

1. To improve and extend existing programs and develop new approaches for adult, vocational, and manpower education.

2. To improve and expand the training for individuals having special needs, including the educationally disadvantaged, the unemployed and underemployed, the gifted, and the cultural minorities and to bring about the integration of handicapped students into regular training programs.
3. To improve and extend occupational counseling, guidance, job placement, and followup services in elementary, secondary, and postsecondary programs.
4. To improve the State administration of occupational, vocational, adult, and manpower education.

It should be noted that the vocational education research program, managed within the operational planning system of the Office of Education and the Bureau of Occupational and Adult Education, is a mission oriented program that helps the Deputyship to accomplish its overall goals, rather than a program which attempts to accomplish independent goals of its own. With this management orientation, a primary requirement of the research program was that of determing the specific priorities for fiscal year 1974 funding from within the complete list of multi-program objectives established in support of Deputyship goals.

The selected objectives cited above, and the publicly announced funding priorities to be cited below, involved a second major dimension of the planning process - namely, that of obtaining perspective, advice, and recommendations from especially knowledgeable and cognizant groups. An ad hoc liaison committee representing State Directors of Vocational Education, and representatives of the National Advisory Council on Vocational Education, education staffs of the Department of HEW's Regional Offices, and the National Institute of Education were some of the major contributors to this aspect of the process.

Upon reviewing the advice and recommendations obtained for committing the fiscal year 1974 vocational education research program in relation to particular objectives and specific priority areas, the Commissioner, Deputy Commissioner and the Associate Commissioner selected those to be pursued.

The five research priorities selected for 1974, as subsequently announced in the Federal Register on December 5, 1973, are as follows:

(1) Curriculum Studies. Information is needed to undergird curriculum planning and curriculum development activities. Applied studies will be supported to produce information: (a) for developing individualized and performance oriented curricula, including the state-of-the-art effectiveness, cost, and cost-effectiveness information, (b) that identifies emerging occupations and explicates the curriculum and manpower needs for the area or areas, and (c) that identifies common core of basic skills for one or more occupational cluster areas.

(2) Disadvantaged, Handicapped, and Minority. Information is needed to improve vocational education and vocational education

opportunities for disadvantaged, handicapped, and minority populations. Applied studies will be supported to produce information that is designed for use by decisionmakers at the Federal, State, and local levels. These studies should produce information which will: (a) improve the utilization of existing vocational education resources for target populations, (b) improve the image of vocational education for target populations, and (c) provide a basis for improving access to the field or fields of employment for which individuals in a target group or groups have been trained.

(3) Alternative Work Experience Programs. Information is needed to improve and extend work experience programs. Applied studies will be supported to produce information that: (a) identifies more creative work experience approaches with business, industry, and community and civic organizations, (b) provides a basis for improving student and employer satisfaction in work experience programs, (c) clarifies legal and other barriers to work experience programs, (d) provides a basis for establishing standards for work experience programs, and (e) identifies alternative work experience programs and describes actual or projected costs and costs-benefits of the programs.

(4) Guidance, Counseling, Placement, and Student Followup Services. Comprehensive systems of guidance, counseling, placement, and followup services for students and adults need to be improved. Applied studies will be supported which produce information that: (a) provides the basis for improving career planning for target populations selected

by the applicant, (b) provides the basis for improving student assessment capabilities, and (c) determines the state-of-the-art, impact, cost, and cost-effectiveness information regarding components of comprehensive systems of guidance, counseling, placement, and student followup services.

In addition, several large-scale efforts will be supported to develop components of comprehensive systems of guidance, counseling, placement, and followup services for students and adults. These development efforts should focus on: (a) developing procedures to utilize employment information, (b) developing job placement and followup services for students, and (c) producing inservice training materials designed to improve the skills of professionals and support personnel in utilizing employment information, and providing job placement and student followup services.

(5) Manpower Information and System for Education. Job, manpower, labor market, and demographic data are required by public, private, and proprietary educational administrators, planners, evaluators, curriculum developers, career counselors, teachers, and students. Manpower information needs to be current and appropriately presented if vocational education programs are to be responsive to existing and projected employment opportunities. Applied studies will be supported to improve manpower, job, labor market, and demographic information relevant to the needs of Federal, State, and local educational administrators, planners, evaluators, and other user groups. These studies should produce

information which will: (a) provide a basis for improving the accuracy of manpower projections for educational uses at the State and local levels, (b) provide a basis for matching job requirements to the skills of prospective workers, (c) provide a basis for improving the accuracy of manpower projections for jobs, (d) translate manpower forecasts into program and specific curriculum requirements, and (e) provide the basis for vocational education to interface with economic development groups and to assist in job development approaches.

III. Implementation of the Fiscal Year 1974 Program

The December 5, 1973 announcement in the Federal Register, in addition to setting forth the five priority areas proposed as "additional criteria" applicable to the program for 1974, called for applications to be submitted by a given date in January and listed the approximate amount of funds anticipated for allocation to each State under Section 131 (a) of Part C of the Act. It also announced that special consideration would be given to programs or projects of national, regional, or interstate significance in one or more of the described priority areas. Confirmed by required republication of the announcement, including extension of the application receipt date by one week, this action brought remaining program operational "milestones" into play. These included the following procedures:

- Identify and select personnel for application review panels.
- Receive and log proposals referred by the Office of Education's Application Control Center
- Conduct panel review of applications for technical merit
- Recommend and obtain approval of projects for funding
- Submit approved applications for negotiation of grants
- Award grants
- Notify Applicants not recommended for funding

A review panel was established to evaluate applications responding to each of the five officially announced priority areas. It was also provided that a separately constituted "slate review" group composed exclusively of Federal personnel would review the recommendations from all five panels to prepare a composite set of recommendations for funding to the Deputy Commissioner for Occupational and Adult Education.

Criteria for composition of the various review panels were as follows:

1. Each panel will consist of five voting members in addition to the non-voting Chairperson and Executive Secretary.
    a. The Vocational Research Program Branch Chief or other designated persons will serve as chairperson of the panel.
    b. Two of the voting members will be non-Federal persons.
    c. Three of the voting members will be Federal employees.
2. With consideration to practicality, availability, professional competencies, etc., each panel will include:
    a. Two specialists in the major substantive area of the priority area under consideration. One of these two persons will be a non-Federal specialist.
    b. One specialist in applied studies design will be utilized on the panel. Normally, this person will be a non-Federal person.
    c. One panelist will be an educational generalist.
    d. Normally, one panelist will be a non-educational specialist in the designated priority area.
    e. One or more representatives of minority groups.
    f. Approximately equal numbers of men and women.

3. Panels will be chosen in such a way as to:

   a. Avoid potential conflict of interest.

   b. Obtain geographic spread.

   c. Obtain spread in regard to types of organizations from which the panel members are drawn (e.g. SEA's, LEA's, universities, etc.)

4. A Vocational Education Research Program Project Officer will serve as executive secretary and resource person to the panel, but will not be a voting member of the panel.

The Deputy Commissioner selected members for the various review panels from among nominations made by cognizant staff members on the basis of the above criteria. The relevance and spread of the non-Federal and Federal personnel chosen for each panel is shown by the following listing of members' current positions and affiliations.

Curriculum Studies

Education Program Specialist
Bureau of Occup. & Adult Ed.
U.S. Office of Education
Washington, D. C.

Aviation Education Specialist
Federal Aviation Administration
Washington, D. C.

Research Professor
Human Factors Research Lab.
Colorado State University
Fort Collins, Colorado

Head, Curriculum Center
Mississippi State University
State College, Mississippi

Special Assistant to the
Assistant Secretary for Manpower
U.S. Department of Labor
Washington, D. C.

Disadvantaged, Handicapped and Minorities

Education Specialist
Bureau of Programs for the Handicapped
U.S. Office of Education
Washington, D. C.

Director of Indian Education
State Capitol Building
Oklahoma City, Oklahoma

Day Care Specialist
Social Rehabilitation Service
Department of Health, Ed., and Welfare
Washington, D. C.

Education Program Specialist
Division of Vocational & Technical
Education
U.S. Office of Education
Washington D. C.

Associate Dean, Graduate College
of Education
Florida State University
Tallahassee, Florida

Alternative Work Experience Programs

Chairman, Department of Industrial Education
Temple University
Philadelphia, Pennsylvania 19122

Education Program Specialist
Division of Manpower Development and Training
U.S. Office of Education
Washington, D. C. 20202

Chief, Youth Employment Standards Branch
Division of Equal Pay and Employment Standards
U.S. Department of Labor
Washington, D. C. 20210

Professor of Education
Georgia State University
33 Gilmer Street
Atlanta, Georgia 30334

Guidance, Counseling, Placement and Student Follow-up Services

Education Program Specialist
Bureau of School Systems
U.S. Office of Education
Washington, D. C. 20202

Director, Division of Pupil Personnel
Services
State Department of Public Instruction
Raleigh, North Carolina 27602

Program Specialist
U.S. Employment Service
Department of Labor
Washington, D. C. 20210

Director, Developmental Research Department
American College Testing Program
Iowa City, Iowa 52240

Manpower Information and Systems for Education

Labor Economist
Manpower Administration
U.S. Department of Labor
Washington, D. C.

Director, Occupational Information Unit
Bureau of Vocational Education
Kentucky State Department of Education
Frankfort Kentucky 40601

Director, Institute for Research
on Human Resources
Pennsylvania State University
University Park, Pennsylvania 16802

Education Program Specialist
Bureau of Prisons
Department of Justice
Washington, D. C. 20530

Education Program Specialist
Division of Vocational and Technical Education
Bureau of Occupational and Adult Education
Washington, D. C. 20202

As shown in Table 1, more than 300 applications were received for funding under the fiscal year 1974 vocational education research program. They came from different types of applicants, and varied in the number relevant to the different priority areas:

Table I

Total Applications Received
By
Type of Institution
By
Priority Area

Types of Applicants	Priority Areas					Totals
	Disadvantaged	Guidance	Manpower	Curriculum	Work Experience	
Local Educational Agency	7	31	13	10	5	66
State Educational Agency	2	10	16	17	3	48
College or University	26	28	19	34	10	117
Community Coll. or Tech. Insti.	3	6	6	12	5	32
Non-profit Organization	16	9	9	11	3	48
Profit Organ	7	3	3	0	1	14
Totals	61	87	66	84	27	325

Applications referred to a full panel were independently read and evaluated by all members of that panel prior to meeting jointly as a panel at the U. S. Office of Education in mid-February. Each panelist completed an Application Technical Review Form for each application read, and brought his or her copy of the application and the completed review form to the panel meeting.

The meetings of the several panels took place concurrently, each with a non-voting Office of Education representative as panel chairperson, and another as panel executive secretary. At each panel meeting, the chairperson:

- described procedures for discussing, recording comments, and ranking applications
- stressed the necessity for panel members to withdraw from the meeting and the review and ranking of any application in which he or she had a possible conflict of interest
- conducted discussion of applications in numerical order, encouraging discussion on the part of each voting panel member to promote the fullest possible perspective on each application
- called upon the executive secretary to read any comments or recommendations on the individual application received from the State and/or USOE regional level

- following panel discussion of all of its applications, had each voting panel member to rank each proposal and to complete a composite ranking form for all the applications considered by the panel.

The ranking form provided for each panelist to place five different applications in each ranking category, from highest to lowest category. Individual applications were not assigned a rank within the category. The categorical ranks assigned to each application by the several panelists were then averaged.

Subsequent to the panel meetings, a "slate review" procedure involving the Research Branch Chief and project officers, the Director of the Division of Research and Demonstration, and finally, the Deputy Commissioner, Bureau of Occupational Education reviewed the panel ranking outcomes, application requested budgets, and State allotments in order to:

1. Approve the best applications from each of the five priority areas.
2. Fit otherwise approved applications into the available State allotments.

To carry out the results of this slate review process, the project officer for each priority area and the Branch Chief prepared recommendations for negotiation of the grant for each application approved for funding.

IV. Numbers of Applications Selected for Funding

The applications selected for funding are presented in Table II in terms of types of applicants and the priority area addressed:

TABLE II

Applications Selected for Funding
by
Type of Applicant
and
Priority Area

	Priority Areas					
Types of Applicants	Disadvantaged	Guidance	Manpower	Curriculum	Work Experience	Totals
Local Educational Agency		3	2	1	4	10
State Educational Agency		6	9	13	3	31
College or University	5	7	4	6	7	29
Comm. Coll. or Tech. Inst.		1	1	2	2	6
Non-Profit Organiz.	2	2	5	2	2	13
Profit Organiz.	4					4
TOTALS	11	19	21	24	18	93

V. Overview of Project Purposes and Expected Results

The projects selected for funding are significantly responsive to the announced priority areas as described above. They are relatively short term, none of them exceeding the maximum of 18 months funding stipulated by the 1974 announcement. Nevertheless, many of them do appear to have high potential for major "breakthrough" of national, regional, or interstate significance in respect to the practical problems and issues which led to the recommendation and establishment of the priority areas. All of them promise contructive values for the varied target populations, programmatic efforts, and primary and cooperating institutions to be involved in them. Beyond those directly involved, others will benefit from the production and dissemination of applied products which may be examined and adapted to their own specific needs and situational characteristics.

Highlights of various project purposes and products in the five priority areas will provide an overview of the vocational education research effort as a whole for 1974. Individual abstracts for all funded projects, presented in the final section of this report, offer more complete information describing each of them.

A. Among the curriculum studies, a substantial number of projects are focused on the development of curricula and the publication of curriculum guides. There is strong emphasis on the development of a common core of basic skills in one or all of the 15 occupational clusters being developed by the U.S. Office of Education.

Three projects are addressed to the development of information to undergird curriculum planning and development - one devoted to community college technical mathmatics, one to occupational communications skills analysis, and one to metric conversion in vocational education.

Projects, whether to develop curriculum, determine a common core of basic skills, establish a data bank, represent almost the whole spectrum of job clusters. Emphasis, however is on agribusiness, technology (automotive, nuclear), personal services and health occupations. Several projects will develop individualized and performance oriented curricula.

The proposal which promises most with regard to identifying and undergirding the planning for emerging occupations is a nuclear technology project.

Unfortunately, no applications were submitted which had as objectives the determination of cost-effectiveness of existing or projected programs, despite the specific provision for this in the announced priority. One could only speculate about the reasons for this.

Several projects include teacher education as a major purpose and will provide curriculum-focused workshops and/or seminars.

Overall, the State departments of education, local school systems, and other institutions conducting projects will be reviewing, revising, and expanding their offerings in vocational education and improving the preparation of teachers accordingly.

B. It is important to note that of the five areas given priority attention this year the fields of focus of four are services (guidance and counseling, curriculum, manpower systems, and alternative work experience). The priority area of disadvantaged, handicapped, and minority differs in that it concentrates upon specified categories of people. All of the priority area services, of course, apply with critical importance to the target populations specified in the program announcement. These people are caught up in the syndrome of the nation's most serious socio-economic problems of poverty, crime and delinquency, cultural deprivation, mental retardation, physical disability, and prejudical injustice. Therefore, it is to be expected that information generated by the 12 projects in this area will contain substance of the four priority areas on services, and should contribute significantly to the body of knowledge needed by decision makers concerned with improving the full range of vocational education. Such knowledge is essential to sound decisions which can impact our most serious socio-economic ailments.

As implied in the preceeding paragraph, although D D & M is receiving less funding than any of the other priority areas, the resulting benefits need not be proportionate to the lesser amount of dollar support. Since the 12 DH&M projects necessarily are involved with the services being addressed by the projects in the other four priority areas, the potential in DH&M studies to produce valuable information on guidance, curriculum, alternative work experience and manpower systems is limited only by the effectiveness of performance by those who administer and conduct the study operations at all levels participating in this program--in schools, in research centers, in communities, in the private sector, and in governmental agencies including OE. Conversely, of course, many of the projects for the service priorities include, or are especially addressed to, the needs and circumstances of these special populations. The overall vocational education research program for 1974 offers common ground on which participating leaders at all levels can meet to achieve a sense of programmatic unity, of purpose and action, to understand the challenges and to perform in functionally cooperative and coordinated ways toward serving the intent of authorizing legislation.

The twelve DH&M projects for 1974-75 are being conducted by agencies in 10 of the 56 States and Territories eligible to participate. Regional distribution of projects, by States, appears as follows:

North (east of Mississippi River) - 3 (Ohio, Pennsylvania and Wisconsin)
South - 3 (Mississippi, North Carolina, Texas)
Southwest - 2 (Arizona, New Mexico)
RockyMountains - 1 (Colorado)
Westcoast - 1 (California)

The variety of organizations participating as grantees is:

1 - Association of Indian Tribes in the lower Colorado River

Basin (in Arizona).

2 - Regional Educational Research & Development Laboratory, not university - based (in California).

4 - Profit-making organizations (in California, Colorado, N. Carolina and Pennsylvania).

5 - State Universities (in Mississippi, New Mexico, Ohio, Pennsylvania and Wisconsin).

1 - University (in Houston, Texas).

Each is designed to focus study upon one or more of the target population categories described in the announcement as Disadvantaged, Handicapped, or Minority (DH&M).

The variety of combinations of specific target populations is noteworthy. A few examples:

(1) One university project will undertake to analyze comparative data on discrepancies which exist between aspirations and realities of education, work, and mobility out of the home environment for Rural Indians, Rural Mexican Americans and Rural Anglos in New Mexico.

(2) Another university concentrates upon eighteen educable mentally retarded individuals to (a) determine the decision-making competencies needed by teachers, (b) teach teachers and counselors the skills of using diagnostic test results with them, (c) design effective learning experience programs for on-line inquiry into the characteristics needed for work with such persons.

(3) A profit-making organization's project will produce a construct for model vocational education programs by identifying the elements which account for success in outstanding programs as they affect ethnic minorities specified as American Indians, Urban Blacks, Rural Blacks, Urban Mexican-Americans, Rural Mexican Americans, and Chinese students.

(4) Another university project will study women, in school and in the world of work, who are attracted to careers traditionally limited to men only. This study will produce manuals which describe (a) the features of non-traditional programs and (b) the influences which account for differentiation of females who select non-traditional programs and jobs from those who do not.

The various studies under this priority are designed to address problems and issues pertinent to the educational, social, economic, predicaments of clearly specified categories of American population. The end products expected are information, in forms of reports, compendiums, manuals and factor-analyzed data which should be useful to students, parents, teachers, counselors, administrators and a range of specialists who make decisions to improve vocational education services for subject target populations. All of the projects should produce results which will be useful for decision-making across the nation. The end products will include information on attitudes and influences which relate to the image of vocational education, constructs for model programs, discrepancies between aspirations and realities, validation of instruments which may be modified for application to vocational education students and graduates, competencies needed for affectiveness of professionals, computerized systems capable of utilizing pertinent data on a continuinuing basis, and bases for planning subsequent research, development and exemplary programs.

The value of the results of these projects extends far beyond vocational education for disadvantaged, handicapped, & minority persons. These results must be synthesized with those obtained from the 1974-75 efforts in all five priority areas in order to attain true national significance.

C. The area of alternative work experiences recognizes that the world of action must involve an old member of the educational scene - the system of alternate opportunities for learning offered by business, industry, labor unions, proprietary institutions, the military, cultural agencies, and the like. The learning resources of a community or region, together with those of the government, must be coordinated for effective use. "Work experience" is a composite of all programs combining formal education with work experience (through part-time work and part-time study or alternate periods of full-time work and full-time study.) It premises that direct experience with meaningful work can provide individuals with a unique means of developing their vocational maturity. In addition, it is expected that the close association of school and business that result from work-experience programs - supervision, conferences between students and co-ordinators, and work evaluation - all also help the schools become aware of needed changes in the curriculum to prepare young people for the demands of the working world. It is one of the best ways for the schools to learn about rapid changes and advances in work methods and to revise educational programs in accordance with these advances.

The target populations to be affected by the funded work experience studies are overwhelmly secondary students; secondly, post secondary students; and then there are single studies for distributive education students in rural communities; disadvantaged, minorities and handicapped combined; and women, minorities, veterans and handicapped combined. The latter study is unique in that it addresses the currently employed who may be educationally up-graded and promoted by enrolling such employees as part or full time students in post secondary institutions in either parallel or alternating institutions, in either parallel or alternating cooperative Vocational/Educational Programs. This study, indeed, addresses a critical problem of our time in that our society fails to formulate career education/human resource employment systems which can systematically use human resources to the best advantage and thereby often underutilizes women, minorities, handicapped and veterans.

There are three projects which concentrate on identification of more creative work experience approaches. One seeks to develop a systematic contractual means of providing career education work experiences for secondary students which are both educationally sound and mutually beneficial to the contracting parties. The main objectives are (1) to conceptualize various work experience approaches for secondary students and (2) to obtain data which identifies the most important influences that determines the students' work experience satisfaction.

Also considered is the development of cost models for each major work experience configuration. This cost analysis will attempt to identify direct, indirect and in - kind costs pertinent to the replication of each work experience effort. A second one seeks to measure the extent of participation by women, minorities, veterans and handicapped individuals in existing post secondary cooperative vocational education programs which will attract, hold and place the target population for 2 and 4 year schools. The third will identify skills and understandings related to effective leadership-membership functioning and to developing an experimental curriculum which would be used in secondary schools with students who are entering work-study programs to test the effect of training for their leadership and membership roles in the world of work.

Student and employer satisfaction in work experience program is significant in four of the funded projects. One of these intends to select geographic areas representative of the state as a whole, where they will establish a basis for, and prepare guidelines to facilitate, a higher order of student and employer satisfaction in work experience programs. It is anticipated that the project will yield results which will be useful to school administrators, teachers, community leaders, labor leaders, employers, and to coordinators of work experience programs as they jointly formulate plans for expanding work experience opportunities to accommodate vastly increased numbers of young people age fourteen and over. Another hopes to identify the values of structured and unstructured approaches to the work experience phase of cooperative education programs, enabling education planners to have hard data on which to base their approach to future programs in cooperative education. A third project will aim to improve recruitment and retention of disadvantaged and minority students in the labor force by testing a three phased pilot program.

Another project will model for other schools similarly situated by experimenting in four pilot schools. Each division will design a program that will meet the needs of a particular community, providing students in rural communities with vocational training which should make them employable in distributive occupations in any geographic area. Their objectives consist of constructing a series of simulated occupational experiences, testing in laboratories and providing individualized class instruction based on the curriculum content suggested for first and second year distributive education students and to train teachers to direct students in simulated occupational experiences.

Clarification of legal and other barriers to work experience programs will be addressed by a private, tax-exempt, non-profit organization. It intends to examine in depth the impact of laws, regulations and practices affecting the labor and education of youth -- at the federal, state and local levels and determine where they are found to be restrictive of job opportunities. It will determine where they are found to be restrictive of job opportunities. It will determine, where statutory requirements are found to be non-restrictive, what other factors operate to limit opportunities. Also to be studied are opportunities for work experience programs of all types, particularly those related to educational purposes and involving arrangements with employers, which are affected by education laws, regulations and practices as well as by child labor legislation.

The local and state boards of education found the establishment of standards more a target for their efforts, as three of the five projects funded for them are focused on this. One of these projects will research national and regional programs in work experience that can be redesigned and implemented in its own State. A city school district will compare the effectiveness of varied work experience programs in relationship to student output and program costs. It will also identify the most effective procedures within each project in terms of cost-student benefit so that a more effectively coordinated program can be implemented. Training packages will be developed in a manner which makes the packages transportable and useable by any school district desiring to evaluate vocational education programs. A county board of education, by coordinating the efforts of existing programs in the job development area and using the services of modern data processing, will afford students the opportunity to explore maximum career potentials. The major goal of this project will be to demonstrate that an area-coordinated placement service should be a part of the educational program of all all school systems and that, as such, it deserves the same funding and prestige as the usual and traditional collegiate placement service.

Two college conducted projects are also concerned with standards. One wants their college to reach a more intelligent decision on the future of cooperative education by identifying and analyzing cooperative education programs now operating in colleges similar to itself so that a composite model can be prepared from which to work. The other does not want to create new models, but to utilize what has been previously learned through exemplary and demonstration projects and then fit and mold them together into one functionable program to test the effectiveness of the proposed activities in a rural setting within the State.

Four projects address the identification of alternative work experience programs and address the cost-benefit aspects of them. A State Board for Vocational Education plans identification of alternative work stations; the development of a model system for dissemination of employment information; and the establishment of a Job Opportunity Bank to inform students of employment opportunities. A State University will collect refined cost data that will serve as a guide for future cost data compilation by schools and other organizations. It will provide information about the relative attractiveness of the various work experience programs both relative to one another and to vocational or industrial art programs without a work experience component. Another university will provide evidence which can be used by education and business leaders in deciding whether or not realistic work experience should be included in the practical arts phase of vocational education. Also, the cost of providing work experience versus the use of laboratory or simulated model will be compared. Finally, a State Board for Community Colleges and Occupational Education will develop curriculum for an introductory course in Cooperative Vocational Education/Coordinating Technique, and an alternative delivery system for off campus in-service instruction by using video tape and other media.

D. The principal end products promised for delivery by the approved projects in guidance, counseling, placement, and followup may be classified in the categories appearing below, wherein they are briefly characterized.

1. "Models" or "systems"

One of the projects will seek to establish a model program of career counseling and placement which will (a) lend itself to overall evaluation, (b) provide a context within which methods of career counseling and placement may be developed and evaluated, and (c) have potential for replication and dissemination among school districts throughout the State. It will include elements addressed specifically to the handicapped. Another project will produce comparative effectiveness and cost data in respect to four alternative guidance and counseling approaches for "low income and low educational attainment" college students. Two previously developed models for comprehensive guidance, counseling, placement, and follow-up programs will be integrated as one phase of another grantee's effort. This integrated and comprehensive model for guidance will be based in the curriculum.

Of primary concern in another endeavor will be development of a model for delivery of comprehensive guidance, counseling, placement and follow-up for *each* of the junior and senior high schools relating to a *vocational-technical center* in the State's expanding secondary-level network of such centers. In another State, the purpose of the project is to develop a comprehensive model to effect *a coordinated Statewide, multi-level system* for guidance, counseling, placement, and followup, including a companion *cost-effectiveness approach* to program *planning, budgeting, and evaluation*, and general criteria for a systems approach to manpower planning. The project in another State will produce a model of guidance, counseling, placement, and student follow-up services for the State, which will include staff training materials consistent with the operational program model. Still another Statewide effort will develop and implement a school-community based guidance, counseling, placement, and follow-up program model plan of action. Another State will produce a manual of operations for a K-10 career development guidance planning, budgeting, and management system and/or a model "prepostsecondary program" for grades 11 and 12.

Funds approved for developing a *comprehensive computer-based career guidance* system will support completion of guidance modules and other elements for the grades 7-12 component of the developing system.

Projects in two States are focussed on placement as a critical component. One of these will produce *a model for a comprehensive placement system*, with implementation guidelines. (The other stressed development of practical instruments, which will be discussed below.) The comprehensive placement system will include specific attention to the handicapped and the role relationships of vocational rehabilitation services.

2. Resources for guidance program planning and implementation.

A project involving the adult education programs of a number of local school districts in a metropolitan area will produce a *catalog* of guidance, counseling, placement, and follow-up approaches being used with adults across the country, and a related *user's manual*; it will also provide *materials kits* for three approaches selected for local implementation. Adult ethnic minorities and women are special target groups for the project.

A State-level project will produce a *handbook* on guidance and placement tasks, and a guide for surveying local manpower, student occupational needs, and follow-up. The comprehensive placement project cited above will also produce a set of *implementation guidelines* for a placement program.

Another State-level project will contribute a published kit designed to enable individual school systems to establish goals for their guidance program, identify student needs, plan programs and activities, utilize change and program strategies that will overcome identified problems, and operate a total coreer/vocational guidance program. Curriculum and work experience approaches will be emphasized.

3. Specific instruments

One project is devoted entirely to the planning, developing, and testing of a "student career planning diary" envisioned to be kept by the student personally and used throughout his school years from grades seven to twelve.

One of the products from another grantee will produce instruments for evaluating staff development accomplishments in conjunction with a model for a comprehensive guidance program.

A project to establish a Statewide system of placement and follow-up will develop "forms" for use in these functions, including an annual placement report form. Another project will produce a set of valid and reliable instruments to measure the process and product outcomes of the State's vocational program, including instruments for student evaluation of the instructional, guidance, and placement services provided them, measures of satisfaction and satisfactoriness, and descriptive measures of processes used to implement career related services.

The grant to a national testing agency will enable it to provide guidance personnel with a set of validated measures for assessing cognitive skills, interest, attitudes, and motivations especially useful in programs where a high proportion of students come from disadvantaged backgrounds; with criterion instruments; data on the interrelationships between measures and criteria; and associated guides and manuals.

4. Personnel training

Most of the funded guidance projects provide for some kind of personnel training as an incidental requirement for carrying out the project. Others make personnel development a major intrinsic purpose of the project. The various target personnel in one or both of these categories include project staff, counselors, teachers, "area school" personnel, selected State and/or district level personnel, local site staff, "teams," school administrators, and State "area" staff.

The training to take place in several of the projects is of special significance. In one instance, the project's primary purpose is to develop a State-wide in-service training program for counselors, with the primary means of training to be TV presentations and related assignments and supervised applications of the learning in various operating activities. The State's very large public school Indian population and other minorities, as well as the majority population, will be ultimate beneficiaries of this counselor up-grading. The primary result of another major project will be completion of a full-scale prototype for a staff development program for guidance personnel, instruction of key State education department personnel in the use of the competency-based staff development packages and related technical assistance procedures, field-testing of the prototype in a number of local school districts, and researching several strategies for disseminating resulting products across the country. Another project will provide the State with staff development materials to transmit the knowledge and skills required to implement the comprehensive guidance delivery system also being developed within the project. In another State developing a model for guidance, the Division of Vocational and Technical Education will work closely with the Guidance staff of the State educational agencies in developing in-service education for all counselors in the several counselor associations within the State. The computer-based career guidance project cited earlier will involve the detailed design and development of an in-service training package for teachers, counselors, and administrators, to be tested with the system during the field test period. It will include, in addition to the design, supporting documentation for the system, and suggested ways of incorporating the system into the ongoing guidance and other school programs. As a significant part of another project, a special training package will be developed so that the State's counselors may earn credit toward their sixth year certificate (Specialists Program).

5. Guidance program evaluation emphases

As in the case of personnel training, evaluation purposes and procedures of one kind or another are involved in all the funded projects. At least two of them, however, may have major national impact upon evaluation of guidance programs. One of these, stressing "accountability" throughout its development of a comprehensive guidance program model and of a competency-based staff development model, will emphasize evaluation in every stage of the development of career guidance, counseling, placement, and follow-up programs. The other will produce an evaluation design "consolidating the best of the existing evaluation systems" with the other project-developed end-products.

Beyond the tangible end products that will result from the funded projects in guidance, counseling, placement, and followup, important significances attach to the facts that (1) together they span a wide range of targeted population groups, as shown in Table III below, and (2) involve other important organizations in major cooperative roles, as shown in Table IV.

Table III

Project-Specified Primary Target Populations

Target Population	Number of Times Specified
K-12 students	4
secondary students in general	11
secondary vo-tech students	2
secondary vo-tech graduates	2
post-secondary vo-tech students	1
disadvantaged secondary vo-tech students	1
adult education students	2
college students (low income, low ed. attainment)	1

Table IV

Organizations with Major Project-Cooperative Roles

Type Specified	Number of Times Specified
Employers	6
State DVTE-university link	5
Local schools-university link	5
Public employment service	2
Private employment service	2
Public vocational rehabilitation service	2
Opportunities Industrialization Centers	1
State counselor associations	1

E. Of the 21 studies supported in the manpower information and systems area, two-thirds (14) dealt in whole or in part with improving manpower projections and forecasts for educational purposes at the State and/or local level while one-third (7) provided for matching job requirements to the skills of prospective workers within the scope of their objectives. By contrast, slightly more than one-third of the studies (8) addressed approaches for improving the accuracy of manpower projections within the scope of their objectives while four-fifths (17) sought new ways of translating manpower forecasts into program and specific curriculum requirements to meet the emerging job skill needs of the Nation. Two of the studies focused, in part, on approaches for job development and ways of interfacing vocational education with economic development groups.

Further information about these studies, including the types of institutions selected for conducting the research, special population groups to which the research might apply, and the geographic area on which the research is focused, is provided below. In some instances, expected project or study outcomes have been highlighted to indicate the scope of particular efforts.

1. Improving Manpower Projections for Educational Uses at the State and Local Level. Of the 14 studies which addressed this need, 7 are being administered by SEA's, 5 by colleges and universities

and 1 each by LEA's and non-profit institutions. The SEA-directed studies tended to focus on the development and refinement of state-wide management information systems although a number provided for interfacing the state system with systems existing at the local level. A few of the SEA's, however, elected to concentrate their research efforts on developing individual school district manpower profiles or developing a system for comprehensive vocational education planning at the local level. Colleges and universities, by contrast, selected a regional or national approach to their manpower planning/implementation efforts, with one university focusing on the development and implementation of a model regional information system for vocational-technical education while others approached the problem from a training standpoint or a systems approach for developing basic vocational education information which would be adaptable to all States, regardless of their present management information system, including manpower subsystems. A non-profit organization elected to explore the implications of changes in occupational characteristics in the next decade for purposes of improving vocational education program planning and an independent school district will examine job demands, among other things, in relation to county needs.

At the national level, one of the studies will focus on the development of a basic vocational education information sytem and in the process will produce a maximal list of information elements for inclusion in an information system for use in vocational education planning, a coefficient of importance matrix and an associated report which will describe the procedures which generated the matrix, a summary of self-studies of state information systems in existence, documentation on the exemplary features of existing information systems, and a set of specifications for an information system which will meet the information requirements of various user groups together with a narrative report of how these specifications were generated. Another project will focus on developing a model for a regional information system for vocational and technical education as well as the implementation of the system. This study will indicate the feasibility of regional research and development efforts for information systems in terms of sharing, range and scope of information requests, and problems encountered in tracking migration of trained workers.

A State-oriented study will seek to (1) pilot an automated student accounting module to determine the cost feasibility of expanding a vocational education data base, (2) pilot system-to-system interface through program conventions, (3) pilot a management information retrieval and dissemination process tailored to the needs of vocational education decision makers, (4) and pilot systems capable of producing auditable enrollment, completion, and student follow-up information.

2. Matching Job Requirements to the Skills of Prospective Workers.

One-third of the studies addressed this area to some extent. One of them has focused on developing an employment agency model for providing job information to rural disadvantaged populations. In this study an effort will be made to identify both private and public employment agencies that exist within the target area, determine the types of services rendered by the employment agencies, survey potential users of employment agencies to determine factors leading to non-use of available employment agencies, identify the participation rate of the target population that is served by both private and public employment agencies, identify and analyze those factors which impede or prevent vocationally trained individuals from entering in employment fields for which they have been trained, and develop and test a job placement model which will afford access to employment for disadvantaged groups in fields of employment for which they have been trained. As a consequence of this study, problems affecting the employment of vocationally trained disadvantaged groups will be identified and coordination between public educational institutions and manpower agencies will be improved. And, through the development and testing of the job placement model, disadvantaged groups will be afforded access to employment in fields of employment for which they were trained. The outcomes of this study can be used by local, state, and national education and manpower agencies for future manpower planning strategies.

3. Improving the Accuracy of Manpower Projections for Jobs. Because of the importance of improving the reliability of manpower projections, a number of the studies included this element in their objectives, especially since all educational activities center around training youths and adults for the world of work. In one study, the emphasis will be on bringing the current state-of-the-art of projecting employment levels and

composition to the attention of administrators of vocational education programs and to then describe the data requirements for accomplishing specific types of projections and to relate currently available data to these requirements. These efforts would be followed by developing an information system that is responsive to changing circumstances.

In a related type of study, emphasis will be on analyzing and evaluating the planning, programming, and evaluation functions of the vocational-technical education programs to determine what occupational demand and supply data are required for the accomplishment of these functions. This objective will be followed by a critical survey of existing sources of data on occupational demand collected, tabulated, interpreted, and analyzed by the agencies of the state or commonwealth government as a means of designing a methodology for collecting, tabulating, and analyzing occupational demand data and a methodology for projecting the occupational supply data within the state or commonwealth. Related objectives, eg., developing the methodology for the follow-up surveys of vocational education graduates and designing and developing the required computer program, relate to implementing the manpower information system.

4. Translating Manpower Forecasts into Program and Specific Curriculum Requirements. Better than four-fifths of the studies funded touched on this dimension of curriculum development, i.e., using manpower projections as a basis for program planning and implementation. In one study focused on an Indian population, an effort will be made to collect and analyze basic manpower, labor force, and demographic data on a band of Indians as a basis for establishing a basic household/family information data base to serve as a basis for the consolidation of all existing programs

and agency records maintained by the tribal council, U.S. Public Health Service, and Bureau of Indian Affairs on the reservation. This survey will not only provide a basis for improving manpower planning and projections for vocational education uses at the tribal, State and Federal levels but it will provide a basis for matching industrial labor requirements with the skills of prospective workers from the Indian population. The data will also be used for planning and implementing a reservation area vocational education program, including the development of needed curricula, as well as interfacing vocational, general education, and manpower training projects with reservation area economic and industrial development efforts.

By contrast, another study with a national orientation is concerned with developing a framework of quantitative occupational indicators as a basis for assessing priorities for planning in vocational education. The indicators would include changes in the anticipated level of educational attainment in each occupation, expected changes in opportunities for members of minority groups and for women, and recent anticipated changes in earning levels by occupation. The primary end product of the study will be the development and analysis of occupational characteristics profiles for 1980 and 1985 in approximately 100 occupations which are expected to provide the bulk of the employment in the next decade for young persons with less than a full college education. A distinguishing feature of this study will be the creation of a system of occupational projections joining job opening data with data relating to changes in earnings, in educational attainment levels, and in the anticipated employment opportunities for nonwhites and women. This information will prove useful in program planning, in counseling, and in curriculum development. This study will provide a framework for program planning by relating the occupational projections to recent enrollment and job training data.

A study at the State level will concentrate on developing a State manpower/curriculum management system with emphasis on the development, refinement and use of manpower data in program planning, curriculum development and guidance and counseling; creation of a data base through occupational task/competency/instructional analysis for purposes of program planning, curriculum development and guidance; and development of models for utilizing data in curriculum development with emphasis on instruction of an individualized nature, work experience, and student assessment. When completed, this study will provide a fully-developed Career Program Planning System which will be computerized, including the field testing of the system in the field and in-service training in the use of the system (and manpower data contained in the system) by program planners, curriculum developers, teacher educators and counselors. Through the field testing of the system, techniques will be devised for adding additional manpower data to the system as well as refining and verifying existing data already in the system. A useful end product of this activity will be the identification of priority areas for program and curriculum development in new and emerging occupational areas. Sixty task analyses will be completed and validated in

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priority occupational areas. The utilization and refinement of the task analysis procedures should make an important contribution to vocational education curriculum development efforts as will the identification of common core competencies in priority occupational cluster areas. An associate outcome of this study will be the development of dissemination procedures for task/competency analysis, i.e., the design and testing of a computerized and manual task/competency retrieval dissemination system and an in-service training program for program planners, curriculum developers and others on the utilization of task/competency analysis. The development of criteria-based performance objectives for identified tasks and competencies will be another outcome of this study as will the development of alternate designs for individualized instructional materials based on identified instructional objectives and the design of a model for utilizing task/competency analysis and instructional objectives in developing work experience training agreements. A student assessment model based on task/competency analysis and instructional objectives will also be a derivative of the study as will a field tested procedure for evaluating instructional materials and models.

5. *Providing the Basis for Vocational Education to Interface with Economic Development Groups and to Assist in Job Development Approaches.* Several studies touched, in part, on ways of interfacing vocational education with economic development groups as well as developing viable

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approaches for job creation. In one of them, a local educational agency provides programs in secondary and post secondary vocational-technical agricultural training related to new methods of waste water usage in agricultural production. Subordinate objectives of this study will be to determine the labor demands for occupations which will result from a new farm system (a "closed" waste treatment system) and to do a task analysis on each agricultural position. This initial analysis will provide data needed to develop instructional modules and to determine their place in either the secondary or post-secondary structure. The culminating objective will be the implementation of an articulated curriculum with actual programs. The study could be a model for training personnel to work in and assist in developing similar projects throughout the region and Nation. Other outcomes of this study will be the development of data requisite to determining job demands and agricultural skills needed in manpower requirements for the present and future projects of waste management, control, and agriculture production. Through task analysis and performance oriented instructional development, new programs in agricultural technology and agricultural vocational training will be developed, possibly in agricultural technology, environmental control technology, and agricultural related technology in such areas as crop management and water control management. A unique feature of this study is the involvement of several educational units, governmental units, and private enterprise in addition to a major land grant institution.

In contrast to the above study designed to assess the manpower impact of a comprehensive waste water management system on an entire county, another study will seek to achieve a vocational education-economic development interface by sponsoring a special research training program focused on manpower information and systems for vocational education. This study will serve a selected group of educators who are specifically involved in manpower forecasting and its implications for planning vocational education programs. Some of the results of this program effort should include the expansion of public participation, particularly economic development groups, in planning for programs, services and activities in vocational/technical education as well as a improved ability to modify and develop vocational/technical education programs based upon their forecasted manpower requirements.

VI. Special Projects of National Significance

Of the discretionary $9,000,000 fiscal year 1974 appropriation for vocational education research, nearly $8,000,000 was awarded to the foregoing projects selected as a result of the competitive grant announcement made in the Federal Register on December 5, 1973. The remaining funds are being used to support a number of special projects of national significance to vocational education. These are:

Project Baseline	University of Northern Arizona
Abstracts of Instructional Materials (AIM) Abstracts of Research Materials (ARM)	Ohio State University
Promotion of TV-spot announcements on vocational education research	National Academy of Sciences
Youth Organization Study	Small Business Administration

VII. ABSTRACTS OF FUNDED PROJECTS

VII. Abstracts of Funded Projects

A. Curriculum Studies

(Abstracts for this priority area follow this sub-title page in the order of their assigned project numbers.)

PROJECT NO.: V0003VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Development, Evaluation, and Dissemination of a Post-Secondary Program in Nuclear Technology

INVESTIGATOR AND INSTITUTION: Maurice W. Roney
Technical Education Research Center
Waco, Texas 76705

OBJECTIVES:

1. The major objectives of this project will be to research, develop, evaluate, and disseminate a generalizable program in Nuclear Technology. This post-secondary program will adopt the "modular format" for instructional material. Each instructional module will contain measurable objectives that emphasize practical laboratory experiences.

PROCEDURES:

The first step of the project will be to identify and recruit the writing staff and technical consultants knowledgeable in the areas of this project. A conference on nuclear technology education research and development needs is proposed to (a) assess the "Nuclear Technology Planning Guide," (b) identify additional tasks performed by nuclear technicians, (c) identify most important common tasks for use in development of generalizable curriculum. The staff must then choose the basic materials and system to be developed to give a balanced coverage of nuclear technology for a pilot program plan.

END PRODUCTS:

It is anticipated that approximately 100 instructional modules will be required for a nuclear technology curriculum of which 20 will be developed in this project. In addition, a pamphlet, Curriculum Development Guide, will be developed which will identify the nuclear technology facilities and equipment requirement. This guide would be used to assist schools in the planning and implementation of a nuclear technology program.

PROJECT NO.: V0004VZ

PROPOSED BEGINNING AND ENDING DATES: April 1, 1974 - March 31, 1975

PROJECT TITLE: Career Demonstration Project for Rural Schools in Eastern Wyoming

INVESTIGATOR AND INSTITUTION: Dr. Fred P. Black
Wyoming Department of Education
Cheyenne, Wyoming 82002

OBJECTIVES:

The objectives of the proposed project will focus its efforts on the development of a performance-guaranteed curriculum by the achievement of the following:

1. By the end of the school year, at least 95 percent of the students will demonstrate at their appropriate grade level on validated instruments, an appropriate understanding of the principles of design, production, distribution, and service in the world of work.

2. Ninety - five percent or more of the students leaving each of their appropriate grade levels will demonstrate appropriate attitudes concerning the dignity and importance of work, as measured by appropriate instruments.

3. At least ninety percent of the students will by the end of their appropriate grade level, be able to identify several important industries within our economic system and be able to identify the career ladders and the range of job positions required for the smooth operation of these industries.

4. By the end of their appropriate grade level, not less than 90 percent of the students will show on appropriate tests a willingness to deliver an "honest day's work for an adequate day's pay"

5. Ninety - five percent of all students at their appropriate grade level will be able to predict on objective measures the consequences of competent and incompetent work habits.

PROJECT NO.: V0004VZ (continued)

This proposed project attempts to maken in-roads into the present traditional rural school by field-testing a curriculum that is individualized and fully articulated. By developing a curriculum into individualized personalized learning concepts an enomous versitality is offered the school program as each individual pupil is allowed to capitalize on his own interests and learning style in the pursuit of his own objectives at his own rate of speed using his choice of a variety of learning materials.

END PRODUCTS:

Seeks to develop on a regional four-county basis, encompassing eighteen small rural schools, a fully articulated, individualized, performance guaranteed and occupational-oriented demonstration program extending from kindergarten through grade 14.

PROJECT NO.: V0008VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: The Development and Implementation of Competency Based Curriculum in Vocational Education for Boone County, West Virginia

INVESTIGATOR AND INSTITUTION: Sherry G. Hill
Boone County Board of Education
Madison, West Virginia 25130

OBJECTIVES:

1. To establish program areas within three clusters (building construction, allied health, business and management technology) in concert with an already formed advisory committee.

2. To develop specific competencies for the three clusters.

3. To provide a pre-service and in-service training program for all newly employed administrative and instructional staff.

4. To translate competencies into performance objectives for all six clusters.

5. To develop criterion tests and instructional modules for all areas.

PROCEDURES:

The plan is based solely upon the model for development of a spiral competency-based, individualized curriculum for vocational education. The model presented is the result of previous research in career education, accountability models, USOE program development, RCA program development, and the systems approach to more effective instructional program development. The design of the Boone County Center should ideally accommodate an individualized, competency-based curriculum utilizing the open - space concept. Through cluster advisory committee input and with the assistance of educational consultants (curriculum wtiters, editors, content specialists, behavioral objective specialist) curriculum for the 1974-75 school year will be developed and implemented.

PROJECT NO.: V0008VZ (continued)

END PRODUCTS:

The Boone County Career Center could serve as a model for further development in West Virginia. Other benefits include:

A. A vocational education program that is truly accountable.

B. A career preparation-oriented instructional program that will accommodate the needs of high school students who plan to enter employment upon graduation, the college bound student who has an opportunity to explore career options, the high school graduate who desires advanced postsecondary training and adults in need of training or retraining to be successfully employed.

PROJECT NO.: V0016VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 31, 1975

PROJECT TITLE: Community College Technical Mathematics Study

INVESTIGATOR AND INSTITUTION: Beryl R. McKinnerney
Texas A & M University
College Station, Texas 77843

OBJECTIVES:

The purpose of this research project is to develop an applied or technical mathematics curriculum which will meet the needs of the vocational-technical student. The major objectives to be accomplished during this research project are:

1. Identify those mathematical concepts requisite for entry-level competencies in selected vocational-technical occupations.

2. Develop the identified mathematical concepts into an organized structure of sequential units for the vocational technical student, and

3. Develop curriculum materials, self-instructional learning packets, and pre- and post-tests for each of these sequential units.

PROCEDURES:

The activities necessary to accomplish the stated objectives of this project are divided into three specific phases: identify concepts, develop sequential units, and develop curriculum materials.

END PRODUCTS:

The specific results of this research project will include: (1) a list of mathematical concepts requisite for entry-level competencies in each of the selected occupational areas; (2) a set of structured, sequential technical mathematics units designed to meet the needs of the vocational-technical student in the selected occupational areas; (3) curriculum guides for each of the technical mathematics units; (4) self-instructional learning packets for each of the technical mathematics units; (5) and performance-based pre- and post-tests for each of the technical mathematics units.

PROJECT NO.: V0018VZ

PROPOSED BEGINNING AND ENDING DATES: June 5, 1974 - December 5, 1975

PROJECT TITLE: Identification of Skills Required to Teach Vocational Agriculture in the Trust Territory

INVESTIGATOR AND INSTITUTION: Neal Baker
Trust Territory Dept. of Education
Saipan, Trust Territory of the
Pacific Islands 96950

OBJECTIVES:

This project proposes to identify skills required to teach vocational agriculture in the Trust Territory. The total plan includes the identification of agriculture crops that can be successfully grown in the different Districts of Micronesia; the gathering of technical information needed to produce those crops; and the writing of the curriculum required to teach production of those crops.

PROCEDURES:

Agriculture in Micronesia is very different from any agriculture in the United States, even within Micronesia there exist differences between Districts which must be considered while developing curriculum. This problem necessitates the putting together of a team, consisting of teachers and agriculture personnel, that can write the curriculum for plant agriculture of all Micronesia with authenticity.

END PRODUCTS:

The results expected from this project are as follows:

1. A Vocational Agriculture Plants Curriculum suitable for all of Micronesia grades 10, 11, 12.
2. Student Skill Check List for the above curriculum.
3. Teacher Skill Test for the above curriculum.

PROJECT NO.: V0021VZ

PROPOSED BEGINNING AND ENDING DATES: March 1, 1974 - September 30, 1975

PROJECT TITLE: A Pilot Project to Generate Critical Analyses of Problems and Processes in Operational Strategies and Components Essential to College-wide Competency Based Curricula

INVESTIGATOR AND INSTITUTION: Ruth M. Laws and Joseph L. English
Delaware Technical and Community College
Dover, Delaware 19901

OBJECTIVES:

Delaware Technical and Community College is a multi-campus, two year Associate-degree granting institution of higher education which provides academic, technical and continuing education opportunities for youth and adults in the State of Delaware. As with any multi-campus college, it is obvious from an instructional point of view that rapid growth is accompanied by many problems. One of these problem areas is the absence of competency based curriculum materials suitable for new and expanding occupational clusters. Concomitant problems arise from the absence of a developmental model and a delivery system appropriate for the task.

This project, with the above problem in mind, has established the following goals:

1. Design of a paradigm applicable to the development of college-wide learning system;

2. Development of competency based prototype system for a selected occupation in the personal service career cluster.

PROCEDURES:

A management system has been designed to define operational strategy necessary for the development of a competency based learning system as well as a learning system to reduce time and costs related to the development and compliance of new curriculum components. A curriculum laboratory shall be established to afford students, faculty, counselors and other staff members an opportunity to generate, test, analyze, and evaluate various procedures and products.

PROJECT NO.: V0021VZ (continued)

END PRODUCTS:

It is expected that the proposed competency based system design will yield instructors who will be able to write, implement, utilize, and design a variety of teaching strategies in order to meet individual needs.

PROJECT NO.: V0022VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Designing Educational Learning from Task Analysis

INVESTIGATOR AND INSTITUTION: Dr. Stanley Douglas Patterson
Divison of Vocational Education
Montgomery, Alabama 36104

OBJECTIVES:

The purpose of this project is to develop catalogs of performance objectives and criterion-references measures based on occupational analysis and to utilize the catalogs in developing curriculum materials. This project will translate the catalogs of performance based objectives into curriculum materials and disseminate these curriculum materials to appropriate vocational educators. The specific objectives of the project are:

1. Identify a common core of basic skills for seven occupational cluster areas.
2. Prepare catalogs of performance objectives and criterion-referenced measures for seven occupational cluster areas.
3. Field test the seven catalogs of performance objectives on incumbent workers in the occupational areas.
4. Conduct in-service education for curriculum developers on the utilization of performance objectives.
5. Utilize the performance objective catalogs in designing curricula materials.
6. Disseminate the catalogs to other states for utilization in curricula development.

PROCEDURES:

By utilizing an adoption of the Air Force System for task analysis and performance objectives development, a design will be planned that will catalog criterion-referenced performance objectives and translate the catalogs of objectives into curricula materials that can be utilized by vocational educators at the secondary, post-secondary, and adult levels.

PROJECT NO.: V0022VZ (continued)

END PRODUCTS:

The results will include a model for curriculum development, a series of curriculum products, and in-service training for curriculum developers.

PROJECT NO.: V0033VZ

PROPOSED, BEGINNING AND ENDING DATES: June 15, 1974 - August 15, 1975

PROJECT TITLE: Determination of a Common Core of Basic Skills for Agri-business and Natural Resources.

INVESTIGATOR AND INSTITUTION: J. David McCracken
Ohio State University Research Foundation
Columbus, Ohio 432121

OBJECTIVES:

The major purpose of this project is to identify a common core of basic skills for agri-business and natural resource instruction in vocational education.

The primary objectives are:

1. An initial inventory of tasks performed by workers in selected occupations representing all occupational areas of agri-business and natural resources.
2. An occupational survey report of tasks performed by workers in selected occupations in agri-business and natural resources.
3. Tasks common to all occupational areas identified by analysis of data.
4. Recommendations for utilization of common tasks in curriculum revision and evaluation, and in career orientation and exploration.

PROCEDURES:

The work required to accomplish the objectives of the project will be accomplished through effective project management, construction of an initial inventory of tasks performed by workers in selected occupations representing all occupational areas in agri-business and natural resources, acquisition of information about each task, analysis of data, and preparation of recommendations for utilization of common tasks in curriculum revision and evaluation, and in career orientation and exploration.

PROJECT NO.: V0033VZ (continued)

END PRODUCTS:

Two written products will be developed from this project. A summary report will be prepared for nationwide dissemination. A limited number of the complete detailed final report will be prepared for the sponsor and contributors to the project. Primary dissemination of the complete final report will be through the ERIC system.

PROJECT NO.: V0073VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 30, 1975

PROJECT TITLE: Occupational Communications Skills Analysis

INVESTIGATOR AND INSTITUTION: James L. Blue
Coordinating Council for Occupational Education
Olympia, Washington 98504

OBJECTIVES:

The purpose of this project is to gather the information necessary for building curriculum materials related to (1) communications skills used every day on the job and (2) the supportive vocabulary that will allow a more effective application of the technical vocabulary learned in technical programs.

PROCEDURES:

To answer the students' constant plea to make supportive classes more relevant to their technical training, this project will gather curriculum material that would emphasize such communications skills as:

A. giving and receiving directions, instructions and orders.

B. describing and defining materials, processes and requirements.

C. asking for information and services.

D. explaining technical processes in non-technical terms.

There would also be emphasis on identifying curriculum material that would establish a vocabulary making possible the development of activities and study material using the descriptive and discriminative words/phrases that allow effective application of a technical vocabulary. These kinds of materials would emphasize the kinds of communications that occur daily in more informal interactions (1) between employee and supervisor, (2) between customer and employee, and (3) among employees.

PROJECT NO.: V0073VZ (continued)

END PRODUCTS:

A manual including results of the task analyses and the basic vocabulary will be published for each occupational cluster. The manuals will be printed in a quantity sufficient to supply the appropriate state educational agencies, representatives of the Vocational Curriculum Management Center in the six-state region, and the curriculum management centers of thenational network.

PROJECT NO.: V0087VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - September 1, 1975

PROJECT TITLE: Instructional System Development Model for Vermont Area Vocational Centers.

INVESTIGATOR AND INSTITUTION: John R. Faust
State Department of Education
Montpelier, Vermont 05602

OBJECTIVES:

The following objectives will be met in this program:

1. Establish a process design for instructional system development that will become a model for total development of individualized instruction for all occupational clusters offered in Vermont vocational programs.

2. Ascertain the quality and quantity of instructional materials available to Vermont instructors of health occupations, auto industries, and food services occupations.

3. To show through product development and application, that competent vocational instructors when given training time and resources, can develop and use competently, all phases of the instructional system.

4. Utilizing the three occupational clusters of health occupations, automotive industry, and food services, design and implement an instructional system that will be used by all vocational centers offering these clusters.

PROCEDURES:

A maximum of five team members from each occupational area will be selected to determine a process to follow in implementing the needs for any part of the individualized instructional system, following the recording of all input data. There will be a planning period when the project director and team leaders will identify those instructional materials that will, or could be produced during this period. The team members will then be recalled to carry out their curriculum development assignment for the system.

PROJECT NO.: V0087VZ (continued)

END PRODUCTS:

The design of the project and the results will be available, through a final report and recommendations for further development, to all state and local personnel to encourage the expansion of the design to all curriculum areas.

PROJECT NO.: V0091VZ

PROPOSED, BEGINNING AND ENDING DATES: June 1, 1974 November 30, 1975

PROJECT TITLE: Initiation of a Master Plan for Relevant Occupational Curriculum through Vocational Education. (Project IMPROVE)

INVESTIGATOR AND INSTITUTION: William D. Woolf
Utah State University
Logan, Utah 84321

OBJECTIVES:

The goals of this project are: (1) to develop a State Curriculum Master Plan which will strengthen and make more relevant existing vocational programs in Utah's secondary and post-secondary schools and (2) to enable the state administration to more effectively supervise and maintain quality in state vocational programs, using the Curriculum Master Plan.

PROCEDURES:

To create a State Curriculum Master Plan, applicable to all vocational programs regardless of grade level, based on proven management tools, that will, as its product, prepare a formula to be used by state department personnel, local administrators, local teachers and instructors, and teacher educators to improve vocational education programs in the State of Utah.

END PRODUCTS:

The long-range goal of project IMPROVE is to assure that every secondary and post-secondary vocational education program in Utah is valid, efficient, and effective. The document product outcomes of the project include four models, (1) Efficiency Test Model, (2) Effectiveness Test Model, (3) Validation Model, (4) Pre-service Model, that fuses into a functional, dynamic, single system designed to improve vocational education in Utah and called the Curriculum Master Plan.

PROJECT NO.: V0100VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Competency Based Curriculum Development

INVESTIGATOR AND INSTITUTION: Herbert Bruce
State Department of Education
Frankfort, Kentucky 40601

OBJECTIVES:

1. To teach the selected personnel to develop competency based curriculum packages.

2. To develop thirteen curriculum packages in thirteen vocational-technical areas.

3. To compare the effectiveness of the curriculum packages with curriculum now being used in existing programs.

PROCEDURES:

Since instructional program organization varies from area to area, it will be necessary to develop a specific research design for each curriculum package. Because of technological changes social changes, and the like personnel in vocational-technical education need up-to-date curriculum and inservice training in developing and using such materials. A committee of five vocational-technical teachers and one technical content specialist will be recruited for each of the priority areas to design an area's curriculum package. Each package will be edited and reproduced.

END PRODUCTS:

Both the curriculum packages and the research findings resulting from this project will have significant impact locally in Kentucky, regionally through V-TECS and the regionalization effort, and nationally through the national network for curriculum coordination and dissemination (NNCCD).

PROJECT NO.: V0121VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 30, 1975

PROJECT TITLE: Assessment and Modification of Vocational Education Plan

INVESTIGATOR AND INSTITUTION: R. Courtney Riley
Nevada State Department of Education
Carson City, Nevada 89701

OBJECTIVES:

The following objectives relate to the main priority of this project which is to produce information for developing individualized and performance oriented vocational curricula in a comprehensive career education plan for Kindergarten through grade 12.

1. To make a thorough evaluation of the Carson City preliminary vocational plan.

2. To revise and update the Carson City Vocational Plan for immediate implementation during the 1974-75 fiscal year; to develop an ongoing vocational plan for at least the following five year period.

3. To implement the components necessary to get the revised plan on schedule.

PROCEDURES:

The organizational structure and deployment of key personnel are basic to the success of a project of this magnitude. It is essential to obtain involvement from all vocational areas as well as from the school administration and other academic or curricular areas. The evaluation, planning and implementation of a developed curriculum plan will be accomplished through a project Steering Committee and a Resource Committee with the overall administration, direction and monitoring being the responsibility of the Utah State Department of Education, Vocational-Technical and Adult Branch.

END PRODUCTS:

Completion of this project will result in a long-range comprehensive vocational education plan for the Carson City School District. When the plan is fully implemented, all students will be made aware of vocational and career opportunities, adequate guidance services will be provided, and students who desire specific vocational training will have the opportunity to develop necessary job skills through identified school and community resources.

PROJECT NO.: V0128VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 30, 1975

PROJECT TITLE: A Research Project to Develop, Mediate, and Field Test Performance-Based Individualized Instructional Materials in the Two-Year Agri-Business and Farm Management Curricula in Three Missouri Community Colleges

INVESTIGATOR AND INSTITUTION: Marvin R. Fielding and Nila Hibdon
State Fair Community College
Sedalia, Missouri 65301

OBJECTIVES:

1. Develop individualized units of instruction for the six core courses and selected other courses in the farm management and the agri-business curricula.

2. Individualize and mediate each instructional unit.

3. Conduct a workshop for post-secondary agri-business instructors.

4. Field test the the individualized instructional materials developed by the project staff.

5. Prepare final report.

PROCEDURES:

Organize an advisory committee to council with the project staff concerning the activities and selection of materials and technical information related to the development, mediation, and field testing of the individualized instructional units to be taught in each course in the three cooperating institutions. An instructor's and student's manual would be developed for each course and units of instruction.

END PRODUCTS:

The quality of instruction in the three project schools would be improved because the individualized units of instruction would be based upon previous research to identify competencies required by industry for entry-level employment. The organization of instruction on a one-to-one basis will provide for individual differences and will enable students to enter at anytime and exit when objectives are met.

PROJECT NO.: V0151VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Metric Conversion in Vocational Education

INVESTIGATOR AND INSTITUTION: John L. Feirer
Western Michigan University
Kalamazoo, Michigan 49001

OBJECTIVES:

1. To produce seven sets of instructional material in basic career areas by identifying the specific metric learning needs for selected occupations.

2. To prepare simple metric instructional materials in the language of one or more of the minority groups, persons with reading difficulties, and persons with sight handicaps including the blind.

PROCEDURES:

Since all American workers have a vital interest in the issue of metric conversion it is extremely important that vocational education identify the kinds of information and skills needed to integrate this material into existing curriculum materials. The problem of metric conversion will be far more difficult in vocational education than in academic areas as the students must learn not only the measuring system but also international standards. To aid in curriculum development this project will develop curriculum analysis for education and/or training programs in at least 4 of the career clusters, one including manufacturing, construction, business and office and health. Most of the activities of this project will be completed by consultants under the direction and in cooperation with the Director for the Center for Metric Education.

END PRODUCTS:

To produce a metric instruction program that will indicate the instructional methods to be used, the instructional technology to be employed and the necessary learning materials to be included.

PROJECT NO.: V0155VZ

PROPOSED BEGINNING AND ENDING DATES: June 15, 1974 - December 14, 1975

PROJECT TITLE: Development of a Curriculum Delivery System for Individualizing Instruction in Vocational-Technical Education

INVESTIGATOR AND INSTITUTION: To be Selected
Florida Department of Education
Tallahassee, Fla. 32304

OBJECTIVES:

The purpose of this project is to develop a curriculum delivery system for individualizing instruction in vocational-technical education.

Specific objectives for the project include:

1. Development of a theoretical framework for the curriculum delivery system.
2. Identification of contributing components and processes of the system.
3. Development of validated criteria to be used in the selection organization and presentation of learning experience.
4. Field testing and refinement of criteria used in the teaching learning process.
5. Promulgation of the curriculum delivery system, including components and processes.

PROCEDURES:

The first major component of the plan calls for the establishment of a curriculum development task force composed of **nine** experts in the field of education, representing Florida School Districts, Community/ Junior Colleges and Universities. The task force will develop a position paper outlining the theoretical framework of the system and the relationship of its components. Upon completion of the paper, criteria which learning managers utilize in the individualization of learning experiences, teaching techniques and organization of learning experiences will be developed. Two concurrent activities will occur as criteria are being developed. First, a national panel of experts in curriculum theory and research will be selected to review and critique the theoretical framework, its processes and the criteria to be used in the learning manager process. The second concurrent activity will be the selection of teachers-learning managers who are experts in the individualization of instruction.

PROJECT NO.: V0155VZ (continued)

Their purpose will be validation of criteria developed by the task force and critiqued by the panel.

END PRODUCTS:

Anticipated outcomes will include: (1) a position paper describing the theoretical framework and implications of the curriculum delivery system; (2) completion of the curriculum delivery system components and processes; (3) validated criteria by which learning managers may individualize instruction; and (4) assessement instruments to be used in process measurement.

PROJECT NO.: V0173VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Comprehensive Plan for the Improvement of Vocational Education Curricula in Pennsylvania

INVESTIGATOR AND INSTITUTION: John W. Struck
Pennsylvania Department of Education
Harrisburg, Pennsylvania 17126

OBJECTIVES:

To develop, test, implement and expand Pennsylvania's research and development activities in the curriculum studies priority areas by using two sites:

(1) Admiral Peary Area Vocational Technical School (Ebensburg)

(2) McKeesport Area School District

PROCEDURES:

The resources of the aforementioned agencies are being brought together to provide for the effective utilization of research funds. While the overall thrust of the various components is geared toward a unified effort, each site assumes specific responsibilities. The individual components will provide inputs for a cohesive vocational education curriculum studies effort directed by the Bureau of Vocational Education and the Research Coordinating Unit in the Pennsylvania Department of Education.

END PRODUCTS:

The most significant overall benefit of this project will be to improve Pennsylvania's vocational education curricula. The benefits will be achieved through individualization, occupational orientation, alternative work experience and related innovative activities.

PROJECT NO.: V0177VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Cooperative Curriculum Research in Vocational Education

INVESTIGATOR AND INSTITUTION: George Russ
State Department of Education
Trenton, New Jersey 08625

OBJECTIVES:

1. Develop and compare an in-school career guidance and self awareness curriculum with the existing curriculum in the seventh and the eighth grades at the junior high school level.

2. Develop and test the effectiveness of individualized and performance based career oriented academic core curriculums at the senior high school level.

PROCEDURES:

Qualified personnel will work to develop individualized and performance based curriculum for vocational students within the existing structure at high school level. They will also assist in developing an associated career guidance curriculum at the junior high school level. The research design will consist of a statistical analysis to compare the treatment groups with the control groups. The control groups will consist of individuals who are pursuing the existing curriculum content. The students in the treatment and the control groups will be tested using a criterion test designed to measure the cognitive aspects of (1) the performance based individualized academic core curriculum for the vocational students at the srnior high school, and (2) the cognitive understanding of the career exploration areas within the junior high school.

END PRODUCTS:

Results of this research undertaking are expected to provide tested curriculum strategies for vocational education and career guidance at all levels of public instruction.

PROJECT NO.: V0188VZ

PROPOSED BEGINNING AND ENDING DATES: July 1, 1974 - June 30, 1975

PROJECT TITLE: A Performance-based Education Program in Vocational-Technical Teacher Education and 2-year Vocational-Technical Associate Degree Programs

INVESTIGATOR AND INSTITUTION: August W. Korb
Northern Montana College
Haure, Montana 59501

OBJECTIVES:

1. To develop, implement and evaluate a program of performance-based education.

2. To refine, revise and reconstruct the system as appropriate.

3. To disseminate the findings for most effective utilization.

PROCEDURES:

Through the use of consultants, advisory committees, and faculty, performance goals and behavioral objectives will be identified and validated for each vocational-technical area in which Northern Montana offers instruction. In developing this project, the assumption is made that formal education must be coupled with various learning experiences such as: cooperative work experience, intern teaching, observation, fieldtrips and other types of supervised on-the-job experiences. During the first year of the project, materials will be developed and various types of field experiences implemented. Six cooperating school districts will be used for providing experiences in the local schools. All students will be required to exhibit their competencies as they achieve the performance goals identified for each program. Dissemination will be accomplished by keeping all Montana school districts, teacher training institutions, professional organizations, press and media apprised of the projects progress.

END PRODUCTS:

This project will identify common cares of basic skills for occupational clusters and personalize the instruction to assist the student in achieving the skills. It will provide alternative approaches to learning including work experience, observation, participation, interning and other techniques where applicable. Performance abilities (competencies) will be identified so as to eliminate redundancies in the preparation of a technician or teacher, to give recognition to those abilities which have been developed through experiences other than those of a formal classroom situation, and to insure that competencies required for employment are in fact attained.

PROJECT NO.: V0201VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Empirical Determination of Effectiveness of a Competency Based Program in Distributive Education

INVESTIGATOR AND INSTITUTION: Charlotte M. Raphaelson
Syracuse University
Syracuse, New York 13210

OBJECTIVES:

1. Redesign the present Distributive Education program at Syracuse University in personalized, performance and competency based format with varying degrees of detail for different program components.

2. Develop competency based instructional materials for the distributive education component of the baccalaureate program consistent with the New York State Department of Education curriculum and national concerns in distributive education and implement them through the Syracuse program.

3. Test the effectiveness of these instructional materials by the development of appropriate assessment procedures.

4. Test the effectiveness of the instructional materials developed and used in a competency-based mode relative to the traditional mode of instruction.

PROCEDURES:

The Distributive Education Teacher Preparation Department of the College for Human Development and the School of Education at Syracuse University is undertaking a research and development program in the area of curriculum renewal. This applied study approach will produce information for developing individualized, performance oriented, competency - based, pre-service teacher education programs in distributive education. In the process of the implementation of the S. U. program, empirical data relative to the effectiveness of some of the major components of a competency based program will be provided and compared to traditional programs.

PROJECT NO.: V0201VZ (continued)

END PRODUCTS:

Despite the broad impact of the competency - based movement on American teacher education, no one has really determined empirically whether or not, or to what extent, competency - based instruction improves the learning, attitudes, knowledges and skills of the students. This project will make a substantial beginning in this direction in relation to the distributive education teacher education program.

PROJECT NO.: V0249VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 31, 1975

PROJECT TITLE: A Project to Computerize Peformance Objectives and Criterion-Referenced Measures in Occupational Education for Research and Determination of Applicability to Handicapped Learners

INVESTIGATOR AND INSTITUTION: Bob E. Childers
Ben A. Hirst, Jr.
Southern Association of College and Schools
Atlanta, Georgia 30308

OBJECTIVES:

1. Develop and implement a system for computerizing and storing catalogs of performance objectives and criterion-referenced test items to permit identification of defective performance objectives and criterion-referenced measures from experience and information obtained by the field-testing activities of the Vocational-Technical Education Consortium of State (V-TECS).

2. Develop and implement a system for retrieving from the computer performance objectives and criterion-referenced measures based upon the identified job title and other needs of requesting agencies.

3. Develop and implement a system for coding performance objective and criterion-reference measures on the computer to permit retrieval by job title and ability of the various handicapped learners to perform the objectives and criterion-referenced measures.

4. Develop, plan and conduct a conference for curriculum developers in the V-TECS states concerning the scope, use, implementations, and dissemination of the catalogs of performance objectives and criterion-referenced measures.

PROCEDURES:

Through the use of computer accessing equipment permitting rapid research and retieval, the above objectives would be realized. The information derived will become an integral part of the activities under development by the consortium of seven states associated in V-TECS. The availabity of computer capability is assured throuth the cooperation of the Nashville State Technical Institute.

PROJECT NO.: V0249VZ (continued)

END PRODUCTS:

A comprehensive collection of performance objectives and criterion-referenced measures would be available on the computer. This material could be retrieved by O. E. Code, by D. O. T. job title or combinations of both. In addition to putting together catalogs for specific programs, the system would be flexible enough to retrieve performance objectives and criterion-referenced measures which were common to a cluster of occupations. This information could be utilized for planning portions of related subjects courses. Due to the fact that all performance objectives and criterion-referenced measures are based upon current task surveys of incumbent workers, the material would be germane to the real "world of work" and would provide the capability of eliminating "deadwood" and obsolete skills from current and future vocational, technical, and career education programs.

The ability to determine appropriate and attainable performance objectives and criterion-referenced measures for the handicapped learner could enhance the incorporation of these learners into the regular vocational, technical, and career education mainstream. The handicapped learner could be prepared using performance objectives and criterion-referenced measures which offer a high probability of attainment and/or achievement.

PROJECT NO.: V0258VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - December 30, 1975

PROJECT TITLE: A Study for the Articulation of Competency-Based Curricula for the Coordination of Vocational-Technical Education Programs in Louisiana

INVESTIGATOR AND INSTITUTION: Gertrude M. Enloe
Louisiana State Dept. of Education
Baton Rouge, La. 70804

OBJECTIVES:

1. To determine standards for levels of competencies of selected curricula within vocational-education areas.

2. To develop a plan for coordinating instruction between high schools, vocational-technical schools, and colleges through the use of standardized competency - based curricula.

3. To provide instructors with guidelines indicating levels of achievement for each vocational education course.

PROCEDURES:

The Louisiana State Department of Education will have the authority to implement this project in an effort to achieve the stated objectives. This will be a state-level coordination to involve all institutions. This project will be accomplished by sub-contracting to institutions under the Louisiana State University system, Louisiana State Board of Education, or other recognized research agencies. The Louisiana State Department of Education will direct the project on a continuing basis. This will be accomplished by on-site visitations as well as reporting by the sub-contractors.

END PRODUCTS:

An articulated competency - based curricula would result in cohesiveness of institutions offering vocational education by determing the following benefits:

1. Student placement

2. Recognized competencies

PROJECT NO.: V0258VZ (continued)

3. Curriculum materials are coordinated in each Regional Center.
4. Identification of these problem areas in curriculum models for the special needs students.

Resulting from this study of vocational education curricula, supplemental information will be assessed regarding teacher education, teacher certification, equipment, and cost analysis by programs.

PROJECT NO.: V0260VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Project CAREER/CAN (Career Analysis Network)

INVESTIGATOR AND INSTITUTION: Vincent P. Lamo
Massachusetts State Dept. of Education
Randolph, Mass. 02021

OBJECTIVES:

1. Develop a common core of data - a bank of basic skills and knowledges relative to the 15 USOE clusters.
2. Increase job accessibility and occupational opportunities for target populations of special needs students.
3. Develop a methodology to accommodate the training needs of a Division of Occupational Education region.
4. Continued expansion of the base data which is the "four process".

PROCEDURES:

Project CAREER/CAN has as its primary focus the development of instructional-curriculum data which evolve from the basic Project CAREER product, a computerized bank of occupationally-oriented behavioral objectives generated from task analyses, validated by representatives from business and industry, and coded for their attainability by students with special needs. The instructional data developed for each performance includes four columns of information: prerequisite learnings, concepts, component tasks, and alternative environments related to a specific behavioral objective. Project CAREER/CAN becomes the translation of the performance objectives into curriculum content data. This Project, therefore, is a study in curriculum planning and development.

END PRODUCTS:

The continuation and expansion of Project CAREER/CAN will produce the much needed curriculum sought after today by communities, students, parents, educators, business and industry, and tax payers in general. The successful preparation of our young people for productive and rewarding participation in society relies heavily upon "real world" information available to and usable by educators. This Project, then, in its attempt to gather, organize, and translate valid world-of-work information into instructional material, brings the "out there" into the schools and the general educational system.

PROJECT NO.: V0274VZ

PROPOSED BEGINNING AND ENDING DATES: July 1, 1974 - June 30, 1975

PROJECT TITLE: A Proposed System for Implementing Vocational Education Articulation Agreements in the University of Hawaii's Community Colleges and with the Hawaii State Departments of Education.

INVESTIGATOR AND INSTITUTION: To Be Selected
Office of the State Director for
Vocational Education
Honolulu, Hawaii 96822

OBJECTIVES:

1. To develop, cost and test a system for implementing the recommendations contained in the vocational education articulation agreements among the University of Hawaii Community Colleges and in the Hawaii State Department of Education's secondary vocational education programs.

2. To identify, develop and recommend job performance standards in the four articulated vocational-technical areas to facilitate student transition from secondary to post-secondary level and transfer between colleges.

3. To identify, describe, select and recommend an articulated counseling and testing program to assist students in choosing and "following through" their occupational preparation track efficiently and successfully.

PROCEDURES:

In order to accomplish the foregoing objectives, it is incumbent to research, develop and organize information and data on staffing, program registrants, counseling and testing services being provided, job performance tasks being used or already developed, budget and workload in the vocational education area concerned; identify cost factors and cost estimates for implementing the articulated recommendations with alternative and/or incremental phases indicated. This project is designed to maximize inter-relationships among the institutions cooperating in the articulation agreements.

PROJECT NO.: V0274VZ (continued)

END PRODUCTS:

The expected result of this research project is a system-designed, tested and documented - which will give school administrators reliable data in order for them to activate plans of action to carry out articulated agreements. The physical product of the project will be a bound and published document which can be easily distributed and used by local school authorities.

VII. Abstracts of Funded Projects

B. Disadvantaged, Handicapped, and Minority

(Abstracts for this priority area follow this sub-title page in the order of their assigned project numbers.)

PROJECT NO.: V0010VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - May 30, 1975

PROJECT TITLE: Assessment of the Influence of Special Vocational Programs Upon the Attitudes of Rural Disadvantaged Adolescents.

INVESTIGATOR AND INSTITUTION: Herbert M. Handley
Mississippi State University
Mississippi State, Mississippi 39762

OBJECTIVES:

1. To determine how well vocational education programs have been accepted by special needs students.

2. To measure the influence of the special programs for disadvantaged on the development of the following behaviors in students:

   a. positive self concepts
   b. positive attitudes toward school
   c. work values serving as motivators for future work
   d. maturity for vocational choice

3. To determine the relationship of the students' progress in the special programs, as assessed by their instructors, to the development of their behaviors related to self concept, attitudes toward school, work values and vocational choice.

PROCEDURES:

The research schedule is conceptualized in three phases: (1) selection of participants and instruments; (2) collection of data and (3) analysis of data and reporting of results.

END PRODUCTS:

The final report would be an evaluative study to determine whether participation in a special vocational program for training educationally disadvantaged adolescents is influential in developing selected attitudes among students that are conducive to their attaining positive vocational commitments.

PROJECT NO.: V0034VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: The Educational and Occupational Aspirations - Rural and Minority Youth in New Mexico

INVESTIGATOR AND INSTITUTION: Everett D. Edington
New Mexico State University
Las Cruces, New Mexico 88003

OBJECTIVES:

1. To determine the level of educational aspirations and expectations held by three cultural groups in rural New Mexico.

2. To determine the level of occupational aspirations and expectations held by three cultural groups in rural New Mexico.

3. To determine the level of mobility expectations held by three cultural groups in rural New Mexico.

PROCEDURES:

Voluntary responses to a questionnaire will be obtained from a geographically stratified sample of tenth and twelfth grade students. The sample will include at least one hundred respondents from each of the rural populations of Indians, Mexican Americans, and Anglos for a total sample exceeding six hundred. The responses to the questionnaire will provide measures of the above objectives as well as measures of divergence between aspiration and expectation for education, occupation, and mobility.

END PRODUCTS:

The data collected will be analyzed to provide the following information:

1. Overall estimates of educational, occupational, and mobility aspirations and expectations for the rural population of New Mexico.
2. Overall estimates of divergence of goals for education, occupation and mobility.
3. Comparison among cultural subgroups on all dependent measures.

PROJECT NO.: V0034VZ (continued)

4. Indication of change in realism between tenth and twelfth grades.
5. Determination as to whether an interaction exists among grade level, cultural subgroup, and sex on the observed traits.

This data will be used for the orientation of educators and counsellors to fulfill their need of objective knowledge of the expectations and aspirations of their students.

PROJECT NO.: V0076VZ

PROPOSED BEGINNING AND ENDING DATES: June25, 1974 - September 25, 1975

PROJECT TITLE: Applicability of the Vocational Students
Index (VOI) for Vocational Students

INVESTIGATOR AND INSTITUTION: Marna C. Whittington
Associates for Research in
Behavior, Inc
Philadelphia, Pa. 19104

OBJECTIVES:

1. To determine the predictive relation between in-program VOI scores and subsequent work or non-work behavior for an individual.

2. To develop a diagnostic approach which will increase the probability of trainees with non-work profiles going to work.

3. To continue longitudinal follow-up of respondents to determine if there are long term changes in the VOI after leaving the program.

6. To develop materials that will assist Skills Centers in ameliorating non-worker profiles.

PROCEDURES:

This project has been designed in three major phases. The first phase is an exploratory one in which the basic elements of the VOI will be reevaluated for use with the younger vocational school population. Phase II will consist of a large field operation for data collection within the vocational schools, and a mil survey of the graduates for the previous two years from the schools in the sample from which will be obtained an analysis of the data and a detailed comparison of results during Transition to Work II and III. Phase III will be the development of specific material to be used by the educational/training system to help students who don't have a worker profile attain one while they are still within the public system.

PROJECT NO.: V0076VZ (continued)

END PRODUCTS:

A final report will describe the psychometric characteristics of the VOI (VS) and the characteristics of the in-school and out-of-school samples. The diagnostic and predictive value of the VOI (VS) and the relation between the findings of this study and the previous. Transition to Work studies will be discussed.

PROJECT NO.: V0134VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Non-traditional Vocational Education
Programs for Women

INVESTIGATOR AND INSTITUTION: Jacob J. Kaufman
Pennsylvania State University
University Park, Pennsylvania 16802

OBJECTIVES:

1. To identify vocational education programs of secondary schools in 10 cities which have succeeded in preparing female students for occupations which are traditionally considered as appropriate only for males.

2. To identify the circular objectives of these programs and the techniques used to attract students.

3. To follow-up graduates and dropouts of these programs to determine the nature of their employment experiences.

4. To identify the factors in the schools and communities where non-traditional programs have been offered which appear to lead to the acceptance of such programs.

5. To identify developmental or situational influences which differentiate female students who select non-traditional programs.

PROCEDURES:

The research strategy to be followed will compare traditional and non-traditional programs for both males and females. The project number of students that will be studied in each school will be 200 each of present and former students. Data will be collected from present of students in their schools and from former students by mailed questionnaires and personal interviews. Each non-traditional program will be observed and evaluated by a team of recognized experts in vocational education. Data will be computer-analyzed by an advisory board. At a feedback conference the participants will be encouraged to comment on the data and make suggestions for additional analyses.

PROJECT NO.: V0134VZ (continued)

END PRODUCTS:

The final report will be on the basis principles that appear to be essential to conduct non-traditional programs. A series of manuals describing the features of each of the non-traditional programs will be developed. These manuals will present in "cookbook fashion" the steps that the research indicates are essential to establish non-tratitional programs

PROJECT NO.: V0135VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - June 25, 1975

PROJECT TITLE: Assessment of Need in Programs of Vocational Education for the Disadvantaged and Handicapped

INVESTIGATOR AND INSTITUTION: Edgar A. Parsons
System Science, Inc.
Chapel Hill, North Carolina 27514

OBJECTIVES:

1. To analyze and evaluate the more effective programs which are helping the designated target population to succeed in vocational education.

2. To estimate needs for current programs to achieve demonstrated effectiveness levels (eliminate dropouts and expected failures, and enroll those wishing to be served).

3. To analyze findings in terms of selected administrative and budgetary implications of voc-ed for the selected target populations.

PROCEDURES:

A coordinated approach has been developed which will achieve these objectives efficiently. The approach consists basically of three co-ordinated and mutually reenforcing activities - determining the state-of the-art by a seminar process, State Plan analyses, and a field survey. These activities are to be supported by (1) updating an extensive existing compilation of literature and (2) continuing consultation and guidance from an expert Advisory Committee.

END PRODUCTS:

It is proposed that the final documentation will consist of two major components: a final report and a compendium of descriptions of successful programs. The final technical report will document the procedures and results of all the tasks described above. Further, it will synopsize successful programs which have been identified and synthesize all recommendations for program improvement.

PROJECT NO.: V0139VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - October 31, 1975

PROJECT TITLE: An Investigation of the Teacher Competencies Needed to Utilize Diagnostic Test Data in Prescribing Occupational Learning Experiences in Teaching Educable Mentally Retarded (EMR).

INVESTIGATOR AND INSTITUTION: Orville Nelson
University of Wisconsin - Stout
Menomonie, Wisconsin 54751

OBJECTIVES:

1. To identify the diagnostic test data vocational teachers need in order to make valid decisions related to the design and management of learning experiences for EMRs.

2. To determine the teacher competencies needed to interpret diagnostic test data for EMR students.

3. To determine if the vocational teacher needs special competencies in order to construct valid and effective learning experiences and programs for EMR students.

4. To determine if a 2-week workshop can develop the vocational teacher competencies needed to provide viable learning experiences for EMRs.

5. To assess the impact of a workshop experience on the vocational teachers teaching activities.

6. To determine the feasibility of using an interactive computer program which the vocational teacher could use for assistance in developing instructional materials for EMRs.

PROCEDURES:

Investigation has found that vocational educators in Wisconsin have a critical need for additional training related to working with handicapped students. The research activities in this project are designed to identify the types of information needed in decision areas and to determine the decision making competencies teachers must have in order to generate the appropriate learning environment for the EMR student. The workshop for

PROJECT NO.: V0139VZ (continued)

participating teachers and counselors will be concerned with the use and interpretation of diagnostic test data related to EMRs in developing vocational education learning experience. A second workshop session will develop the teachers' competencies in designing learning experiences for EMRs based on diagnostic test data. A computer inquiry system for vocational educators will be developed to provide an opportunity for on-line inquiry on the characteristics for use with EMRs.

END PRODUCTS:

If the objectives of this project are successfully attained, the large investment presently made in testing EMRs will be turned into relevant and effective occupational education learning experiences for these students.

PROJECT NO.: V0215VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - June 30, 1975

PROJECT TITLE: Guidelines for Improvement of Vocational Education Programs and Resources to Serve Needs of Handicapped Children

INVESTIGATOR AND INSTITUTION:
R. James Cameren
Performance Mangement Specialists
Inc.
Englewood, Colorado 80110

OBJECTIVES:

1. To determine the current perspective regarding vocational interests, education and employment of handicapped youth in Colorado.

2. To determine the characteristics of regular vocational programs identified as exemplary in their provision of appropriate opportunities, training and services to the handicapped.

3. To determine the characteristics of vocational education opportunities, training and services currently provided handicapped students in Colorado.

4. To determine the discrepancies existing between the desirable and actual vocational education programs for handicapped students.

5. To develop recommendations concerning program modifications and changes which would allow Colorado public schools to serve the vocational and career education needs of handicapped students.

PROCEDURES:

A methodology of survey research will be employed in conducting the project. Within the survey research framework, the project will be accomplished in five Phases: (1) descriptive; (2) normative; (3) survey; (4) comparative; and (5) reporting. Project evaluation will be used to determine the achievement of project objectives and project effectiveness in meeting identified clientele needs.

PROJECT NO.: V0215VZ (continued)

END PRODUCTS:

Results of the project will provide guidelines for program development and modification for Colorado State agencies and public schools to improve vocational education opportunities for handicapped learners. In addition, the guidelines will provide useful information to vocational educators on a nation-wide basis. The major benefit to be derived from the research project is an increase in the utilization and improvement of existing vocational education resources by the handicapped student population in Colorado.

PROJECT NO.: V0219VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - June 24, 1975

PROJECT TITLE: Student Attitude Toward Vocational Education

INVESTIGATOR AND INSTITUTION: Michael S. Black
Ohio State University
Columbus, Ohio 43210

OBJECTIVES:

1. To collect information about the attitudes of minority and disadvantaged groups toward vocational education.

2. To develop guidelines for vocational education administrators and teachers to aid them to effectively recruit among minority group members to take vocational education courses, or to take any action such as establishing public relations programs to improve the image the target population holds toward vocational education.

PROCEDURES:

The basic approach will be the determination of attitude constructs of the target population, and a comparison of their positions on these constructs with those of non-target population control groups. General large metropolitan areas will be selected, appropriate officials contacted and arrangements made, and a stratified sample selected from the population containing representative proportions of minority and disadvantaged group members, males and females, and varying socio-economic groups. Ninth graders will be used as subjects since they will not yet have decided to enter a vocational program in high school, but will be about to make such a decision. The data obtained will be factor analyzed to identify the underlying attitude constructs. The scaled position of all subjects on the constructs will be determined and a comparison made between the target population and the non-minority non-disadvantaged groups.

END PRODUCTS:

The type of data to be obtained will be verbally defined, self - response, Lickert - scale items presented in printed format. Each item will have some information about respondent attitude, image, or perception of some aspect of the vocational education situation. Cross - validation on an independent sample will be used to establish the validity of whether the results are truly representative of the target population.

PROJECT NO.: V0241VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - June 30, 1975

PROJECT TITLE: A Study to Design a Model of Effective Approaches, Methods and Techniques to Meet the Needs of Ethnic Minorities in Vocational Education.

INVESTIGATOR AND INSTITUTION: Wallace T. Homitz
Homitz, Allen and Associates
Oakland, California 94609

OBJECTIVES:

1. To identify vocational education programs that are presently meeting the special needs of specific grous of ethnic minority students.

2. To identify, within the successful programs, motivational techniques and strategies that are, or have been, effective in inspiring ethnic minority students to enter and persist in vocational training programs.

3. To describe those successful programs and those effective motivational techniques and strategies in complete enough detail so that they can be successfully inserted into other contexts.

4. To recommend a model vocational education system embracing at least five individual vocational education programs which, in the judgment of the contractor, would attract and retain students in each of the following ethnic groups: American Indian, Black-Urban, Black-Rural, Mexican-American-Urban, Mexican-American-Rural, Oriental.

PROCEDURES:

A multi-phase strategy of assessment is proposed that includes: a Planning Phase; a Review and Analysis Phase; a Data Collection and Collation Phase, involving a mailed questionnaire survey of exemplary programs identified in the literature; a Field Survey Phase -- visitation, observation and interview of staff and students at selected successful model sites; a Development Phase, in which recommendations for models of at least thirty individual programs are formulated; and a Writing and Review Phase, in which the final report is written and submitted.

PROJECT NO.: V0241VZ (continued)

END PRODUCTS:

A Final Report will be prepared which will include descriptions of techniques, strategies and models and recommendations for their use. This report will be reviewed by the Advisory Committee and printed.

PROJECT NO.: V0257VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Career Guidance Orientation Research Program (Amended)

INVESTIGATOR AND INSTITUTION: Kenneth R. Patterson
Colorado River Indian Tribes
Parker, Arizona 85344

OBJECTIVES:

1. To provide Tribal Councils, Schools, State and Federal Planners with research statistics for future programming in Career Orientation.

2. To expand the Rehabilitation Centers' efforts in evaluating and providing more effective Career Orientation Programs for Indian youth.

PROCEDURES:

Control groups of Indian students will be selected in several locations throughout Arizona. Each student in the control group will be evaluated on an equal basis using common testing scores and questionnaires. The methods employed by the school will be analyzed and recorded in the study. The control students will then participate in a Career Orientation Program developed for this school district by the Colorado River Rehabilitation Center with professional and/or Vocational Career persons. The project will attempt to define which career orientation methods are most successful for specific types of individuals after gathering data, evaluating and designing a system that will select data to answer the questions sought by this research project.

END PRODUCTS:

The accumulation of accurate and appropriate data that can be analyzed and projected into practical and effective career guidance orientation procedures for Indian youth.

PROJECT NO.: V0324VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Targeting Information to Market Segments: An Action Oriented Study of Attitudes Toward Vocational Education Among Target Populations

INVESTIGATOR AND INSTITUTION: Linda A. Sikorski
Far West Laboratory for Educational
Research and Development
San Francisco, California 94103

OBJECTIVES:

1. To provide information about the structure of current attitudes of minority and disadvantaged students toward vocational education.

2. To provide information about the relationship of these attitudes to more fundamental beliefs of students and their parents about education, work, and society in general.

3. To provide information about what segments of the current population of disadvantaged and minority students might be reached and positively affected by selected information campaigns.

PROCEDURES:

The objectives of this study will be achieved by implementing a marketing research approach to provide policy makers in the field of vocational education with much more substantial information about why the current array of vocational education programs are attractive or unattractive to, and accepted or rejected by, disadvantaged and minority students. This approach provides for an intensive study of the way in which attitudes can be segmented according to fundamental or underlying beliefs held by the study population. "Q" techniques developed by William Stephenson will be used as a methodological basis for creating the segments to be studied.

END PRODUCTS:

At the completion of this project, those responsible for the operation of vocational education programs will have a great deal more information than they now have about how to improve the utilization of existing resources to meet the needs of disadvantaged and minority students. Specifically, they will be provided with some concrete examples of informational campaigns that will be useful in attracting selected groups of disadvantaged and minority students to vocational education programs.

VII. Abstracts of Funded Projects

C. Alternative Work Experiences

(Abstracts of this priority area follow this sub-title page in the order of their assigned project numbers.)

PROJECT NO.: V0011VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Alternative Work Experience Programs

INVESTIGATOR AND INSTITUTION: Ray Karnes
University of Southern Mississippi
Hattiesburg, Mississippi 39401

OBJECTIVES:

1. To identify and describe the more creative but feasible work experience alternatives toward which business, industry, labor, community and civic organizations, school personnel, school boards, parents and students may be favorably disposed and for which general support may be obtained.

2. To establish a basis for and prepare guidelines to facilitate a higher order of student and employer satifaction in work experience programs.

3. To analyze and clarify the legal, social, economic, employer, labor, parental, educational and travel barriers to work experience programs, and formulate plans for offsetting these barriers.

4. To develop guidelines which include suggested standards for work experience programs.

5. To assess the project costs and cost-benefits for each of the alternative work experience programs identified.

PROCEDURES:

The project staff will establish an advisory council whose competencies will enable them to contribute to the project. The council members and staff will select the geographic area(s) within which data will be collected and the feasibility of alternate plans for work experience programs will be field tested. Facts about the area will be compiled and analyzed; instruments will be prepared identifying the number and types of employment situations in the area(s) which offer opportunities. To obtain assessments of the level of support anticipated from employers, community group, school personnel, parents and students, structured interviews will be the primary procedure. Assuming that concensus can be reached, guidelines, standards, and long-term plans will be prepared for implementing one or more of the alternative work experience program in the area.

END PRODUCTS:

It is anticipated that the project will yield results which will be useful to school administrators, teachers, community leaders, labor leaders, employers, and to coordinators of work experience programs as they jointly formulate plans for expanding work experience opportunities to accomodate vastly increased numbers of young people age fourteen and over.

PROJECT NO.: V0017VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 31, 1975

PROJECT TITLE: A Study of Structured and Non-Structured Work Experience Programs in Texas

INVESTIGATOR AND INSTITUTION: Gerald D. Gutcher
Texas A&M University
College Station, Texas 77843

OBJECTIVES:

1. To provide an impetus and incentive for community colleges to become more active in cooperative education programs.

2. To prepare guidelines for developing structured work experience programs.

3. To structure programs for the initial phases of work experience in approximately five occupational areas.

4. To clarify the relative benefits that might accrue to students enrolled in either a traditional vocational-technical cooperative program or a structured work experience program.

PROCEDURES:

A pre-test and post-test control group design has been chosen for this project. Thirty two students will be selected from community colleges in Texas offering vocational-technical instruction. Random and equal assignment to control and experimental groups will be made so that each group contains twenty-five subjects. Subjects assigned to the experimental group will be placed in industrial training stations where the employer has agreed to follow the structure and schedule as established for that occupation. The control group subjects will be placed in training stations where no attempt will be made to alter or modify the learning procedure from that which is normally followed. At the conclusion of four months of work experience, all subjects will be administered a second form of the occupational competency test used as a pre-test. The scores resulting from the pre-test and post-test will be subjected to statistical treatment to determine the relative value that one type of work experience possesses over the other.

PROJECT NO.: V0017VZ (continued)

END PRODUCTS:

This study will provide a determination of the relative values of the structured and unstructured approaches to the work experience phase of cooperative education programs. This determination will give educational planners hard data on which to base their approach to future programs in cooperative education. Since the community colleges of Texas have not become greatly involved in cooperative education as yet, this project is viewed partly as an instrument through which institutions may be encouraged to implement such programs.

PROJECT NO.: V0023VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 30, 1975

PROJECT TITLE: A Role Model Approach to Job Transition for Disadvantaged Cooperative Home Economics Students

INVESTIGATOR AND INSTITUTION: Ruth Pestle
Oklahoma State University
Stillwater, Oklahoma 74074

OBJECTIVES:

1. To improve recruitment and retention of disadvantaged and minority students the following questions must be answered:

A. What strategies are involved in setting up a system of orienting students to jobs involving four types of people--successful workers, students, teacher-coordinators, and employers?

B. What benefits accrue to successful workers, students, teacher-coordinators and employers when a role model relationship is added to the training situation?

C. What problems occur in implementing this role model type of training program?

D. In matching students and role models, what combination of the possible bases, such as age, race, academic ability, economic disadvantages are most important in terms of student success on the job?

E. What possible refinements would need to be made before conducting further research of an experimental design?

F. What factors limit and/or permit generalizability of this program to other vocational areas and to rural as well as urban population?

PROCEDURES:

An exploratory, pilot design is considered best for this research. The project requires three phases: a planning period for cooperatively developing with school and business representatives the methodology for carrying out the program, implementation period of the normal school year from September to June, and finally, time in which to begin to follow graduates into full-time jobs in order to discover the effects of the innovative program.

END PRODUCTS:

Methodology and materials for program implementation that will result in:

A. Smoother transition of target group into the labor force

B. Greater retention of target group in school

C. Greater retention of target group in the labor force

D. Having generalizability to other vocational subjects and to rural as well as urban settings.

PROJECT NO.: V0032VZ

PROPOSED BEGINNING AND ENDING DATES: June 15, 1974 - December 15, 1975

PROJECT TITLE: Fargo Area School Work Experience Program

INVESTIGATOR AND INSTITUTION: David C. Tehle
N.D. State Board for Vocational Education
Bismarck, North Dakota

OBJECTIVES:

1. To identify more creative work experience approaches with business, industry and community and civic organizations.

2. To provide a basis for improving student and employer satisfaction in work experience programs.

3. To identify alternative work experience programs and determine project cost benefits of the programs.

4. To develop procedures to utilize employment information.

5. To produce in-service training material and to offer workshops as a method of providing supportive services to school personnel in the areas of placement and follow-up activities.

PROCEDURES:

Progress toward the accomplishment of the objectives will involve a series of interrelated activities to include:

1. An intensive orientation program designed to acquaint school personnel with program objectives and activities.

2. Student surveys to determine interest in and desired occupational and employment information.

3. Community surveys to determine availability of work experience stations and past work experience outlooks.

4. Establishing and maintaining a job bank.

PROJECT NO.: V0032VZ (continued)

5. Developing a delivery system for placing students in work-related educational settings.

6. Monitoring and evaluating project achievements and coordinating student-industry activities.

7. Preparing policy guidelines for implementing work experience programs based on project findings and results.

8. Conducting a regional workshop for teachers, counselors, and administrators.

END PRODUCTS:

Some of expected outcomes are as follows:

A. Identification of alternative work stations for program participants.

B. Development of a model system for dissemination of employment information.

C. Establishment of a Job Opportunities Bank (JOB) designed to inform students of employment opportunities.

D. Development of guidelines for establishing alternative work experience programs.

PROJECT NO.: V0050VZ

PROPOSED BEGINNING AND ENDING DATES: June 15, 1974 - September 14, 1975

PROJECT TITLE: Research and Development Project in Work Experience Programs

INVESTIGATOR AND INSTITUTION: Alan Sinclair
R.I. State Department of Education
Providence, Rhode Island 02908

OBJECTIVES:

1. To upgrade, expand, and humanize the existing occupational training programs to a level at which the fullest potential of the target students will be reached.

2. To research national and regional valid programs that can be redesigned and implemented in the State of Rhode Island.

3. To utilize existing educational resources.

PROCEDURES:

In-state information from the 30 various work experience programs will be collected, evaluated, and field tested. A model program will be established for the target population in Rhode Island. Following pilot implementation, the results of these developmental programs will be disseminated. In-service workshops and conferences will be conducted to demonstrate validated educational practices which are consistent with local and statewide needs.

END PRODUCTS:

Information concerning existing programs will be gathered, redesigned and redeveloped using this new research criteria. The new bank of knowledge assembled by this project will be stored in the Educational Information Center for regional and national dissemination.

PROJECT NO.: V0088VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 31, 1975

PROJECT TITLE: Cost-Effectiveness Study of Work Experience Programs

INVESTIGATOR AND INSTITUTION: Elchanan Cohn and
Morgan V. Lewis
Pennsylvania State University
University Park, Pennsylvania 16802

OBJECTIVES:

1. To examine the costs and benefits of alternative work experience programs.

2. To compare the various work experience programs relative to one another as well as to a control group of secondary students not enrolled in any work experience programs.

3. To extend the scope of the cost-effectiveness methodology by broadening the cost and effectiveness dimensions.

PROCEDURES:

Seven categories of costs would be included in the cost estimates: salaries of instructional personnel, instructional costs excluding salaries, fixed charges, equipment maintenance and repair, other direct costs, amortization costs for buildings, and amortization costs for equipment. The total program costs would be adjusted to account for variations in such relevant factors as the quality of the program and the costs of inputs in the locality. The effectiveness criteria used include the following: employment experience following graduation, hourly wage rates and annual earnings, relatedness of job to training, post-secondary education, job satisfaction, general well-being, attitudes toward and satisfaction from vocational curriculum, success of the programs in retaining potential dropouts, and educational outcomes. The effectiveness measures, in turn, would be adjusted to account for differences in socio-economic status, location of residence, race, sex, marital status, intelligence, etc.

END PRODUCTS:

The study will collect refined cost data which will not only be useful for the present study but also could serve as a guidepost for future cost data compilations by schools and other organizations. It will provide information about the relative attractiveness of the various work experience programs both relative to one another and to vocational or industrial arts programs without a work experience component. Such information should be useful in planning vocational curricula and in adjusting work experience programs in such a manner that they will enhance higher earnings, employability, and other educational, economic, or socio-psychological goals.

PROJECT NO.: V0093VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - August 30, 1975

PROJECT TITLE: An Experimental Study of the Effects of an Alternative Work Experience Program in the Middle School

INVESTIGATOR AND INSTITUTION: Norman D. Ehresman
Western Kentucky University
Bowling Green, Kentucky 42101

OBJECTIVES:

1. To provide information and procedures for the development and improvement of work experience programs.

2. To ascertain whether or not a "real life," hands-on, work experience program for middle school students has a positive effect on students.

PROCEDURES:

The general design of this project is to establish an alternative work experience program to be used as the experimental variable in the research project. The project will be conducted in three phases: Phase I, To develop procedures for selection of students, placement, procedures, training of training sponsers (employers), development and evaluation of training agreements, training plans and research instruments; Phase II, The actual experiment will be conducted. The sample for Phase II will comprise 240 randomly selected and assigned ninth grade students. The 240 students will be assigned to an experimental group (n=120) and a control group (n=120). The experimental group will be given the treatment of participation in an alternative work experience program. The control group will not be given the treatment. Both groups will be pre-posttested; Phase III, Will be concerned with the analysis of data and preparation of the final report.

END PRODUCTS:

The experimental research which is proposed should provide evidence which can be used by education and business leaders in deciding whether or not realistic work experience should be included in the practical arts phase of vocational education. Also, the cost of providing work experiences

PROJECT NO.: V0093VZ (continued)

versus the use of a laboratory or simulated model can be compared and a cost comparison made on other vocational service areas utilizing a laboratory or simulated setting for occupational experience.

PROJECT NO: V0133VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Decision Orientated Evaluation System for Alternative Work Experience Programs

INVESTIGATOR AND INSTITUTION: Alfred Pavlish
School District of the City
of Pontiac
Pontiac, Michigan 48058

OBJECTIVES:

1. To identify those aspects of alternative work experience programs which produce positive approaches with business, industry, and community organizations.

2. To determine methods for improving student and employer satisfaction in work experience programs.

3. To clarify legal and other barriers to work experience programs.

4. To use evaluation evidence to make decisions on standards for alternative work experience programs.

5. To determine program costs on a per student basis and compare program costs in terms of student outcomes.

PROCEDURES:

Educate research team in the use of a formative/summative evaluation through contractual arrangements. Design formative evaluation documents by the research team. The data collected through the use of the documents will reflect the four factors of a modified Context, Input, Process, Product (CIPP) evaluation model. Examine existing programs to identify placement stations. Develop a pilot test questionaire, administer and determine through analysis which placement method yields high student/employer satisfaction score. Find the problems with the laws in relation to student outcomes. Define cost factors in terms of input and process factors.

PROJECT NO. V0133VZ (continued)

END PRODUCTS:

The anticipated benefit of this research project is the production of information comparing the effectiveness of the varied programs in relationship to student output and program costs. The eventual result and benefit of this research project is that it will identify the most effective procedures within each project in terms of cost student benefit so that a more fully coordinated program can be implemented.

PROJECT NO.: V0178VZ

PROPOSED BEGINNING AND ENDING DATES: July 1, 1974 - June 30, 1975

PROJECT TITLE: Competency Based Work Experience/Exploration Contract Programs

INVESTIGATOR AND INSTITUTION: Robert A. Sampieri
Los Angeles Unified School District
Los Angeles, California 90012

OBJECTIVES:

1. To conceptualize various work experience approaches for secondary students.

2. To obtain data which identifies the most important influences that determine the students' work experience satisfaction.

3. To identify various implementation and operational factors.

4. To delineate acceptable educational standards for work experience opportunities.

5. To develop cost models for each major work experience configuration.

PROCEDURES:

The planned approach is an implementation and operational event in five major phases:

A. Planning
B. Work Experience Specification Development
C. Procedures Development
D. Operations
E. Evaluation

A Final Project Report will include, but not limited to, the identification of:

A. A program analysis section
B. An employer analysis section
C. A study analysis section

PROJECT NO.: V0178VZ (continued)

END PRODUCTS:

The primary result of this study will be to develop a systematic contractual means of providing career education work experiences for secondary students which is both educationally sound and mutually beneficial to the contracting parties.

PROJECT NO.: V0180VZ

PROPOSED BEGINNING AND ENDING DATES: July 1, 1974 to December 31, 1975

PROJECT TITLE: Guidance-Oriented Alternative Work Experience Program and Follow-Up Study

INVESTIGATOR AND INSTITUTION: E.M. White
Superintendent of Schools
Caldwell County Board of Education
Lenoir, North Carolina

OBJECTIVES:

The purpose of this project is to design, develop, and field test a guidance oriented work experience program.

PROCEDURES:

The project will be designed to utilize the best guidance, counseling, placement, and student follow-up services in conjunction with training methods for students that are designed to develop skills useable by business and industry. Personnel from business and industry will be actively involved in determining and designing the necessary skills for the prospective employees. A third-party evaluation will be conducted of the project in order to determine the success of fusing academic, training, guidance and counseling, and work experience into a tightly knit program for students.

END PRODUCTS:

The project should produce evidence of the success of a coordinated academic, training, guidance and counseling, and student follow-up services program that is tightly integrated with work experiences in business and industry for students.

PROJECT NO.: V0207VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - March 31, 1975

PROJECT TITLE: A Study of the Feasibility of a Cooperative Education Program and Formulation of a Plan of Action for Implementation at Chadron State College.

INVESTIGATOR AND INSTITUTION: To Be Selected
Chadron State College
Chadron, Nebraska 69337

OBJECTIVES:

1. To determine the feasibility of establishing a cooperative education program for Chadron State College students in western Nebraska.

2. To identify the opportunities for placing students in cooperative work experience positions in the western Nebraska area.

3. To determine the most desirable model for cooperative education in this area of Nebraska.

4. To lend support and possibly improve the quality of management of the small businesses in the area by infusing new ideas and methods from interns.

5. To provide some financial assistance to participating students through obtaining part time positions on some arranged basis.

6. To lend relevance to the curriculum and to provide an opportunity for updating the curriculum in vocational areas.

PROCEDURES:

The first step will be to identify and analyze cooperative education programs now operating in colleges similar to Chadron State College so that a composite model can be prepared from which to work. The second step will be to determine the feasibility of implementing the model in western Nebraska. The final phase of the project will be to write a proposed plan of action for implementing a cooperative education program in western Nebraska.

PROJECT NO.: V0207VZ (continued)

END PRODUCTS:

It is anticipated that the project will achieve the following results:

A. To permit the college to reach a more intelligent decision on the future of cooperative education at Chadron State College.

B. If the decision should be to launch an extensive program in cooperative education, it is expected that the decision and the direction of the program will be guided largely by the findings of this research project.

C. It should be possible to improve the working relationship between Chadron State College and the surrounding area.

PROJECT NO.: V0224VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Developing and Testing Simulated Occupational Experiences for Distributive Education Students in Rural Communities.

INVESTIGATOR AND INSTITUTION: Lucy C. Crawford
Virginia Polytechnic Institute and
State University
Blacksburg, Virginia 24061

OBJECTIVES:

1. To construct a series of simulated occupational experiences, incorporated into individual training plans, to develop identified competencies needed by selected distributive workers.

2. To test these experiences in a school laboratory under the direction of a distributive education teacher-coordinator.

3. To provide individualized, small group, class instruction based on the curriculum content suggested for first and second year distributive education cooperative students.

4. To train selected D.E. teacher-coordinators to direct students in carrying out the simulated occupational experiences.

PROCEDURES:

Pilot programs will be sub-contracted to four school divisions. Each division will design a program that will meet the needs of a particular community. In each model, there will be as much on-the-job experience as possible and relevant learning experiences already developed by other agencies will be utilized. A comprehensive training plan for each student, based on the student's career interest, will be constructed as well as simulated occupational experiences. A five-day workshop will be held prior to the opening of school to train the D.E. teacher-coordinators selected to participate in trying out and testing simulated occupational experiences.

END PRODUCTS:

The results of the experiment in the four pilot schools should provide a model for other schools similarly situated. Therefore, providing students

PROJECT NO.: VO224VZ (continued)

in rural communities with vocational training which should make them employable in distributive occupations in any geographic area.

PROJECT NO.: V0231VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 30, 1975

PROJECT TITLE: Community College and Local Rural Secondary Schools Cooperative Career Assessment and Exploration Program

INVESTIGATOR AND INSTITUTION: Philip D. Langerman
Des Moines Area Community College
Ankeny, Iowa 50021

OBJECTIVES:

1. To incorporate elements of previous vocational or career projects.

2. To implement an action program utilizing select concepts (mobile career exploration model and assessment)

3. To assist in establishing a model for evaluating secondary career education assessment and exploration activities

4. To provide concrete statistical information regarding the students involved in the project.

PROCEDURES:

The primary emphasis of this project is, not to create new models of career education, but to utilize much of what has been previously learned through exemplary and other demonstration projects and fit and mold them together into one functional, operable program. This project will feature two (2) components:

(1) Demonstration or action component
(2) Research or evaluation component.

The action component will provide for a full integration of services from the high school to the community college and a systematic way to provide career exploration to rural districts. Essentially, the evaluation component will be to compare the (A) project group to (B) a normative control group comprised of non-participants.

PROJECT NO.: VO231VZ (continued)

END PRODUCTS:

This project would incorporate the best concepts of several Iowa exemplary and demonstration projects and then test the effectiveness of the proposed activities in a rural Iowa setting.

PROJECT NO.: V0269VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 30, 1975

PROJECT TITLE: Western Computer Assisted Placement Service

INVESTIGATOR AND INSTITUTION: Kenneth H. Smith and George T. Gabriel
Board of Education of Baltimore County
Towson, Maryland 21204

OBJECTIVES:

1. To serve as a job locating service to students.

2. To provide employers with a single source of initial contact with potential employees in the Southwestern area of the county.

3. To gather and maintain current information on area job needs.

4. To relieve job coordinators of job-seeking functions.

5. To improve placement of students.

6. To determine effective methods of evaluating placement efforts.

PROCEDURE:

By coordinating the efforts of existing programs in the job development area and using the services of modern data processing, students will be afforded the opportunity to exercise maximum career potential. The format of operation will be similar to that used by the Federal Job Bank. Daily updating of jobs registered will be transported to the six school locations for use by the local school job coordinators. Students who register for this service will be matched with jobs listed. Each Job Developer will be assigned to work with specific companies to locate opportunities for student employment. As jobs are located, a cooperating school with students registered who fit the employment needs would be assigned to send out applicants for placement. As jobs are located and filled, a continuous up-dating of information in the computer will provide statistical data for future counseling and program planning.

END PRODUCTS:

The major goal of this project will be to demonstrate to the educational community of Maryland and the nation that an area-coordinated placement service

PROJECT NO.: V0269VZ (continued)

should be a part of the educational program of all school systems and that, as such, it deserves the same funding and prestige as the usual and traditional collegiate placement service.

PROJECT NO.: V0294VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 30, 1975

PROJECT TITLE: Cost Effectiveness of Alternative Delivery Systems for Inservice Vocational Teacher Education

INVESTIGATOR AND INSTITUTION: M. G. Linson
State Board for Community College and Occupational Education
Denver, Colorado 80203

OBJECTIVES:

1. To formulate a common curriculum consisting of goals and objectives and evaluation criteria for an introductory course in Cooperative Vocational Education-Coordinating Technique.

2. To develop an alternative delivery system for off-campus in-service instruction in Cooperative Vocational Education and Coordinating Techniques using video tape, discussion leaders and other techniques.

PROCEDURES:

In order to accomplish the objectives of this project, it will be necessary to develop curriculum and a delivery system and then test the total package. Subcontracts will be let to the two vocational teacher education institutions for the development and testing process under the direction of a task force. Once these focusing statements are agreed upon, the task force will supervise the packaging of the needed materials into a delivery system The final section of the research is the testing of the developed system.

END PRODUCTS:

This project will provide mechanisms that will allow the teachers in the field to meet the stated requirements. Regardless of the credentialing and recredentialling requirements as set forth in the Colorado State Plan. The two Vocational Teacher Education institutions in Colorado will be able to serve the vocational teacher in the field with in-service training experiences as well as providing pre-service training for persons desiring to become vocational teachers.

PROJECT NO.: V0297VZ

PROPOSED BEGINNING AND ENDING DATES: June, 1974 - February 28, 1975

PROJECT TITLE: The Transition from School to Work:
A Study of Laws, Regulations and Practices Restricting
Work Experience and Employment Opportunities for Youth.

INVESTIGATOR AND INSTITUTION: Eli Cohen and Don Zimmerman
National Committee on Employment of Youth
New York, N.Y. 10016

OBJECTIVES:

1. To examine in depth the impact of laws, regulations and practices affecting the labor and education of youth--at the federal, state, and local level.

2. To examine non-agricultural employment in both the public and private sector which will include the teenage youth (although focusing on those of secondary school age) of all characteristics.

3. To determine, where the legislature regulation, policies are found to be restrictive of job opportunities, which features contribute to the result and to what extent.

4. To determine, where statutory requirements are found to be non-restrictive, what other factors operate to limit opportunities.

PROCEDURES:

The study will be conducted in a representative sample of approximately six local labor market areas. What will be looked at are those states which have relaxed child labor legislation to determine whether the changes contributed to increased employment and work experience opportunities. However, more than the laws and regulations governing the work place, will be studied. The opportunities for work experience programs of all types, particularly those related to educational purposes and involving arrangements with employers which are affected by education laws, regulations and practices as well as by child labor legislation.

PROJECT NO.: V0297VZ (continued)

END PRODUCTS:

The final report submitted will present the findings of the study, together with recommendations for changes needed in legislation, employer education, administrative procedures, employer and educator policies, practices and attitudes, and the preparation of youth for employment and career development, while protecting minors from the abuse that prompted the enactment of child labor and compulsory school attendance laws in the first place. The development of a model state code will be a key objective of the study.

PROJECT NO.: V0317VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - June 29, 1975

PROJECT TITLE: Research Designed to Facilitate, Improve, and Develop Cooperative/Vocational Education Program and Affirmative Action/EEO Programs.

INVESTIGATOR AND INSTITUTION: Robert C. Burton
Tidewater Community College
Virginia Beach, Virginia 23453

OBJECTIVES:

1. To measure the extent of participation by women, minorities, veterans, and handicapped individuals in existing post secondary Cooperative Vocational Educational Programs.

2. To identify Cooperative Vocational Educational Programs (and the components, policies, and practices thereof) which have had measurable success in enrolling women, minorities, veterans, and the handicapped.

3. To develop model Cooperative Vocational Educational Programs which will attract, hold and place women, minorities, veterans, and handicapped for 2 and 4 year schools.

PROCEDURES:

The methodology will be accomplished in four (4) phases:

Phase One - Instrument development, field testing/administration of instrument to all post secondary institutions with cooperative education programs listed with the U.S. Office of Education.

Phase Two - Analysis of data. This will enable the researcher to determine those programs which have successfully attracted women and minorities, and the particular attributes of such programs.

Phase Three - Development of alternative models for 2 and 4 year institutions which will maximize participation by women and minorities.

Phase Four - Dissemination of findings. A research monograph will be presented for printing and distribution.

PROJECT NO.: V0317VZ (continued)

END PRODUCTS:

The data derived from this research project will be of tremendous benefit to local cooperative efforts between Tidewater Community College and the community. However, the scope of the project and the need is national.

PROJECT NO.: VO325VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - December 31, 1975

PROJECT TITLE: The Effects of Learned Leadership-Membership Skills in Work Performance

INVESTIGATOR AND INSTITUTION: Bela H. Banathy
The Far West Laboratory for Educational
Research & Development
San Francisco, Calif. 94103

OBJECTIVES:

1. To identify skills and understandings related to effective leadership-membership functioning.

2. To develop an experimental curriculum which would be used in secondary schools with students who are entering work-study programs.

PROCEDURES:

The project breaks down into three distinct phases: Analysis, Development, and Implementation and Testing. In Analysis, the size and scope of the problem of social adjustment to work groups would be analyzed, as well as, the issue of group participation, and job-related leadership-membership functions. Phase II, Development, would be accomplished by constructing an experimental curriculum which would be organized primarily around simulation and role-playing exercises for students in secondary school settings. These activities would expose students to various kinds of group situations and facilitate the acquisition of skills. Finally, Phase III, Implementation and Testing, would involve the selecting of a sample (N=50) of students in Bay Area schools and give them the curriculum treatment prior to or at the time of their entering the work-study program. After a training period involving exposure to the experimental course, they would follow up on these students in their new employment settings, by such means as questionnaire, interview, and observation.

END PRODUCTS:

This project can provide, by design, a place in the public school curriculum that offers students practical, tangible learning about leadership and membership.

VII. Abstracts of Funded Projects

D. Guidance, Counseling, Placement, and Followup

(Abstracts for this priority area follow this sub-title page in the order of their assigned project numbers.)

PROJECT NO.: V0013VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Career Counseling and Placement Project

INVESTIGATOR AND INSTITUTION: John D. Alcorn
University of Southern Mississippi
Hattiesburg, Mississippi 39401

OBJECTIVES:

1. To establish a model program of career counseling and placement which will lend itself to overall evaluation.

2. To establish a model program of career counseling and placement which will provide a context within which methods of career counseling and placement may be developed and evaluated.

3. To establish a model program of career counseling and placement which will have potential for replication and dissemination to other school districts throughout the State and region.

PROCEDURES:

The plan of action is divided into four phases: (a) Planning. During this phase the objectives will be to review literature for model building, formulating a research design, developing a program model and establishing relationship with school systems to be involved. (b) Preparation. This phase includes: completion of training staff; development of coordination with prospective employers and development of placement centers in high schools. (c) Implementation. During this phase the action portion of the project will be carried out. (d) Evaluation. During this phase the final evaluation data will be collected and the final report will be compiled for report and dissemination.

END PRODUCTS:

As a result of this project, it should be possible to:

A. Demonstrate the advantages of adding the career counseling and placement function to an existing conventional guidance program.

B. Examine the impact of a career counseling and placement program.

C. Test the efficiency of specific guidance procedures.

D. Explore ways of working cooperatively with employers and community agencies.

E. Provide specific recommendations to other school districts in Mississippi and the region relative to the addition of a comprehensive career counseling and placement program at the secondary level.

PROJECT NO.: V0027VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Improving and Evaluating Guidance and Counseling Services for Economically Disadvantaged College Students

INVESTIGATOR AND INSTITUTION: Don B. Croft
New Mexico State University
Las Cruces, New Mexico 88003

OBJECTIVES:

1. To systematically describe the vocational guidance and counseling services recently initiated at NMSU for the target population in four programs.

2. To install Holland's Self-Directed Search Vocational and Educational Planning materials in the counseling services of two of the four service programs.

3. To identify the association of the classification variables with the criteria.

4. To identify significant differences among the counseling and guidance service programs.

5. To compare the cost-effectiveness of the counseling and guidance programs.

6. To identify the impact of evaluative feedback upon the program.

PROCEDURES:

The study is primarily an applied one because the terminal objective is to improve the operation of guidance and counseling services for low income and low prior educational attainment students, as well as to obtain results which have generalizability to other programs with similar target populations. The application of rigorous statistical techniques within a flexible design for program improvement is mandatory to insure objectivity and the validity of the findings. The information analysis component of the project employs techniques from fundamental research. The sample for the study includes students from low income families, low prior educational achievement, low college entrance examination scores

PROJECT NO.: V0027VZ (continued)

and from Anglo, Spanish, Indian, and Black cultural backgrounds. The military veteran students were included in order to assess the impact of the treatment with a hetergeneous student population.

END PRODUCTS:

Improved counseling and guidance services to low income and low prior educational attainment students may indeed result in higher college retention and subsequent job placement for the target population.

PROJECT NO.: V0028VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Research and Development for a State-Wide System of Placement and Follow-Up of Vocational-Technical Education Graduates

INVESTIGATOR AND INSTITUTION: To Be Announced
State Division of Vocational-Technical Education
Pierre, South Dakota 57501

OBJECTIVES:

1. To develop a vehicle for the flow of information on area school graduates to industry, and the specific needs for and job qualifications of industry to the students.

2. To develop operational requirements for conducting the follow-up system and initiate and test a workable follow-up instrument.

3. To develop a "certificate of program completion" which will identify individual student employment capabilities.

4. To develop an evaluation device of all area school program offerings as they relate to specific job requirements of industry.

PROCEDURES:

The basic plan of action would include the use of consultants in specific areas of expertise to aid in the development of forms, vehicles and various procedures desired. Area school personnel will be involved in intensive in-service training in order for objectives to be carried out. Cooperative efforts will be established between various State and Federal agencies and industrial consultants.

END PRODUCTS:

A system will be created that could identify job availability, a follow-up system of graduates placed on the job, and an evaluation system of matching occupational classifications to vocational education program offerings.

PROJECT NO.: V0029VZ

PROPOSED BEGINNING AND ENDING DATES: July 1, 1974 - December 19, 1975

PROJECT TITLE: Inservice Training for Oklahoma Counselors to Upgrade Counseling Skills in Career Education and Vocational and Technical Education.

INVESTIGATOR AND INSTITUTION: James M. Seals
Oklahoma State University
Stillwater, Oklahoma 74074

OBJECTIVES:

1. To inculcate a thorough understanding of the implications for counselors in career education and vocational and technical education.

2. To assist counselors in the practical application of new information concerning career education and vocational and technical education.

3. To provide on-the-job supervision and evaluative assistance in the utilization of career education and vocational and technical education concepts.

4. To develop an expertise within each participant whereby career education and vocational and technical education can be made definitive, identifiable, continuous and perseverative in Oklahoma schools.

5. To provide accurate data for the purpose of evaluation and future planning.

6. To assist school counselors in articulating secondary and post-secondary programs and services.

PROCEDURES:

The first phase will consist of the development and organization of 18 hours of televised presentations and 12 hours of related content will be prepared as assignments for workshop participants of the inservice training program. The second phase of the program will consist of the actual presentation. The third and last phase of the inservice workshop will provide for on-the-job practical application of the new information.

PROJECT NO.: V0029VZ (continued)

END PRODUCTS:

A statewide inservice training program will be designed to assist Oklahoma counselors in the understanding and application of guidance procedures related to career education and vocational and technical education.

PROJECT NO.: V0035VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Development of a Career Planning Guide for Students

INVESTIGATOR AND INSTITUTION: Grant Venn
Georgia State University
Atlanta, Georgia 30303

OBJECTIVES:

1. To provide the individual student with a personalized instrument to carry out self-evaluation.

2. To promote self-motivation and individualized approaches to career guidance and planning.

3. To systematize the approach and provide a permanent record for the student of both education and work.

4. To field test the instrument in specific schools in Georgia and to revise the design based on these field tests.

5. To test the overall concept of such an approach.

6. To give specific suggestions on how to get work, whom to get help from and how to plan the process of getting, holding and advancing in the world of work.

PROCEDURES:

The overall plan of action would be to design a student planning book for grades 7 through 12. The forms and specific designs will be developed with teachers, parents, students and will be tested in the schools in Georgia. This approach is used as the best way to develop a specific instrument, to test it and to assess its value in terms of user reaction. As the project develops and is field tested and reviewed, a panel of experts will be invited to review the format and to make suggestions.

END PRODUCTS:

1. A designed and tested model of a "Career Planning Guide for Students."

PROJECT NO.: V0035VZ (continued)

2. The development of a commercially published guide available to individual students and to school systems.

3. The model would be available through the ERIC System for use and adaptation by State and local school systems.

PROJECT NO.: V0056VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: A Validated Program Development Model and Staff Development Prototype for Comprehensive Career Guidance, Counseling, Placement, and Follow-Up

INVESTIGATOR AND INSTITUTION: Charles W. Dayton
American Institute for Research
Palo Alto, California 94302

OBJECTIVES:

Comprehensive systems of guidance, counseling, placement, and follow-up services for students and adults need to be improved. This project will attempt to achieve the desired improvement through in-service training designed to improve the skills of professionals and support personnel in: utilizing employment information; providing job placement and student follow-up services; and developing components of comprehensive systems of guidance, counseling, placement, and follow-up. The plan proposed here will integrate existing California and American Institutes for Research models for program development.

PROCEDURES:

Integrating existing models will produce a prototype for staff development that will include competency-based staff development packages with the needed technical assistance to go with the packages. A national survey will be conducted to identify other staff development packages around the nation which would fit into the model. The prototype will be applied and field tested first with State personnel, and then building on their experience and expertise, in two school districts within the State. A reputable evaluative research technique employing a time-series design will be used in each of the three field tests. Information about the training and results of the projects will be disseminated throughout the nation. Finally, a concept paper will be written to recommend an extension of the training and process to other States.

END PRODUCTS:

This research project could move California (and, perhaps, eventually the nation) an important step closer to plugging the gap in the means of moving from master plans and models to concrete implementations and

PROJECT NO.: V0056VZ (continued)

practical outcomes. It will supplement the desired diffusion process by researching modularized training strategies and alternate dissemination techniques. In accomplishing this purpose, it should also integrate well with the National Training Conference on Career Guidance, Counseling, and Placement, coordinated by the Guidance Services Division of the Missouri State Department of Education.

PROJECT NO.: V0059VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Assessing and Field Testing Career Planning and Development Approaches for Adults: Focus on Ethnic Minorities and Women

INVESTIGATOR AND INSTITUTION: Joseph C. Bellenger
San Jose Unified School District
San Jose, California 95114

OBJECTIVES:

1. To identify through a nationwide search involving survey research techniques, viable career guidance, counseling, placement, and follow-up approaches which are being used with adult populations.

2. To implement and field test using evaluative research methodology, three of these approaches in an effort to design prototype materials to meet the needs of ethnic minority and women adults in San Jose's Metropolitan Adult Education Program (MAEP).

3. To disseminate locally, statewide, and nationally a catalog of viable adult career guidance counseling, placement, and follow-up approaches plus a manual which facilitates implementation of approaches selected from the catalog.

PROCEDURES:

MAEP will subcontract with the American Institutes for Research to capitalize on its survey research capabilities to survey the nation for viable adult-oriented career guidance, counseling, placement, and follow-up approaches, and to catalog the findings in a manner which will be useful to MAEP, the state and the nation. MAEP will then identify the most prevalent career planning and development needs of their ethnic minority and women participants and adapt three appropriate approaches identified in the AIR search to fulfill these needs. Using evaluative research methodology, the implementation of these approaches will be attempted in three different MAEP field test sites, and a manual to facilitate subsequent inplementations by persons using this projects' resources will be produced.

PROJECT NO.: V0059VZ (continued)

END PRODUCTS:

The following products will result from this project:

1. A Catalog containing brief descriptions of viable adult-oriented career guidance, counseling, placement, and follow-up approaches in existence around the country.

2. A User's Manual describing the use of the Catalog.

3. Materials Kit for the three approaches selected by MAEP for implementation.

PROJECT NO.: V0077VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Project ACT-Awareness, Careers, and Transition

INVESTIGATOR AND INSTITUTION: Alan R. Campbell
Dexter Regional Vocational-Technical Center
Dexter, Maine 04930

OBJECTIVES:

1. To develop self-understanding, which includes a person's relationship to his own characteristics and perceptions and his relationship to others and the environment.

2. To develop understandings of the work society and those factors that affect its constant change, including worker attitudes and discipline.

3. To develop awareness of the part leisure time may play in a person's life.

4. To develop understanding of the necessity for and the multitude of factors to be considered in career planning.

5. To develop understanding of the information and skills necessary to achieve self-fulfillment in work and leisure.

PROCEDURES:

The project will focus on junior and senior high students to provide them with the opportunity to develop a comprehensive set of personal values upon which he can rely when making career plans and decisions. To accomplish such development, this project's major purpose is to develop materials and procedures to deliver improved career guidance in a rurally isolated area. A follow-up survey will be conducted using the class of 1974 to gather opinion and enumerative data regarding job placement, guidance, counseling, curriculum, and work success.

END PRODUCTS:

The development of a model for delivery of comprehensive guidance,

PROJECT NO.: V0077VZ (continued)

counseling, placement and follow-up with each of the thirteen regional centers established by the State Legislature to deliver comprehensive vocational-technical education programs to Maine youth.

PROJECT NO.: V0078VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Implementation of a State-Wide Guidance Program with Emphasis on Counseling, Placement, and Follow-up for Selected Target Groups

INVESTIGATOR AND INSTITUTION: To Be Named
Indiana State Board of Vocational
& Technical Education
Indianapolis, Indiana

OBJECTIVES:

1. To develop under the direction and supervision of the State Board of Vocational and Technical Education a coordinated system for researching and implementing the project and for disseminating the products to users in decision-making positions.

2. To identify effective concepts and practices in placement services and incorporate these into pre and in-service training of local personnel to implement local placement and follow-up efforts.

3. To develop and implement effective techniques for follow-up of vocational graduates, secondary and post-secondary dropouts, and non-vocational secondary graduates.

4. To provide a transportable cost-effectiveness approach to program planning, evaluation, and budgeting which can be implemented at the local administrative level.

PROCEDURES:

The plan of action consists of developing a comprehensive model coordinated by a statewide, multi-leveled system for guidance, counseling, placement and follow-up as established by the State Board. The role of the master project will lie in researching, implementing, monitoring, evaluating, disseminating, handling monies, and coordinating all aspects of the total project. Supportive contracts will be funded which are designed to insure achievement of the project's objectives.

END PRODUCTS:

The general outcome anticipated is a comprehensive framework for

PROJECT NO.: V0078VZ (continued)

coordinating and improving guidance for Indiana schools at all levels. This system would provide individual educational agencies with a central resource for information, materials, consultation and other services to assist them in their efforts in providing more effective counseling, placement and follow-up services. It is expected that the research component of the project will produce a review of relevant literature and descriptions of ongoing programs both state-wide and nationally.

PROJECT NO.: V0096VZ

PROPOSED BEGINNING AND ENDING DATES: June 30, 1974 - September 30, 1975

PROJECT TITLE: Procedure for Planning and Evaluating Senior High School Vocational Education Programs: A Local-State System

INVESTIGATOR AND INSTITUTION: William E. Stock
Minnesota State Dept. of Education
St. Paul, Minnesota 55101

OBJECTIVES:

1. To develop and test a list of tasks which must be performed in order to operate an effective system of career guidance and placement and then implement and supervise the implementation of these tasks in selected on-going senior high school vocational programs.

2. To obtain base line data for a local program by conducting (a) a survey of occupational needs of students, (b) a follow-up of former high school graduates, and (c) a local manpower survey (and/or obtain data on manpower demand which may already exist).

3. To develop a set of instruments (process and product) to measure the effectiveness of the career education instruction, guidance and placement activities.

PROCEDURES:

The development of four experimental schools to try-out a comprehensive system of providing career education services to senior high school students within a total system of local program planning and evaluation, provides the best vehicle for addressing the general problem of evaluating senior high school vocational education programs. It is anticipated that comparable control schools (schools having no formal placement program) will be selected after the experimental schools have been identified so that meaningful comparisons can be made between experimental and control schools based on comparable follow-up data.

END PRODUCTS:

1. A handbook which describes the task and means to accomplish each task as it relates to operating an effective system of career guidance and placement.

PROJECT NO.: V0096VZ (continued)

2. A procedural guide for conducting and interpreting the results of (a) local manpower survey, (b) an occupational needs assessment of high school students, and (c) a follow-up study of former high school students.

3. A set of instruments to measure the process and product outcomes of the vocational program.

PROJECT NO.: V0105VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: The New Hampshire Model for Vocational Guidance, Counseling, Placement and Follow-up Services

INVESTIGATOR AND INSTITUTION: Richard A. Gustafson
Keene State College
Keene, New Hampshire 03431

OBJECTIVES:

1. To develop, test, and implement, with broad state-wide involvement, the New Hampshire model in guidance, counseling, placement and follow-up services to be used in the 20 area vocational centers.

2. To develop, test, and package the professional development training needed to provide the skills necessary to implement and operate the New Hampshire model.

PROCEDURES:

A task force of up to ten individuals will be appointed to define the elements required to deliver a comprehensive career counseling service. They will identify, acquire, evaluate, and select those materials which may be appropriate for the development of the New Hampshire model. The project staff, with the assistance of the task force, will draft the New Hampshire handbook for guidance, counseling, placement and follow-up services for pilot testing in two area vocational centers in the State. The task force will then define the staff development activities and the content required to prepare professionals to implement a comprehensive guidance, counseling, placement and follow-up system in area vocational centers. The project staff will develop the inservice training materials designed to improve the skills of professionals and support personnel.

END PRODUCTS:

The handbook, as designed, will give the State of New Hampshire a tried and tested model of vocational guidance, placement and follow-up services for its 20 area vocational centers. Also, through the expanded involvement of high school counselors from other schools, this handbook and plan for implementation will be available and useable by any high school in the state. The development of staff training materials for

PROJECT NO.: V0105VZ (continued)

guidance counselors will produce an integrated curriculum for these courses and workshops which will enable them to provide counselors with specific training experiences geared directly to the New Hampshire model.

PROJECT NO.: V0109VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: A Unified School-Community Approach to Remodel Guidance Services and Expand Next Step Placement and Follow-up

INVESTIGATOR AND INSTITUTION: Jim Dasher
Arkansas Dept. of Education
Little Rock, Arkansas 72201

OBJECTIVES:

1. To set up a model school-community based program in guidance, counseling, placement, and follow-up services in selected schools in Arkansas.

2. To have students in grades 7-12 respond favorably to the expanded group and individual guidance services as indicated by a feedback questionnaire.

3. To demonstrate by the percent of students placed in a job or further education preparation, the ability of the project team, in conjunction with other school and community personnel, to identify job openings and additional education preparations.

4. To demonstrate the ability of the project team to provide follow-up services to students who have exited as indicated by the percent of exiting students contacted and served.

5. To have the community demonstrate interest in fulfilling student needs as indicated by the amount of involvement with the school.

PROCEDURES:

To develop model comprehensive secondary guidance and counseling programs by inviting all eligible schools to submit applications for participation in the project. In each participating school, a local project director will be employed, and a project team identified. By the end of the project, each participating school will have a model plan action with recommendations for implementation.

END PRODUCTS:

It is anticipated that the newly structured and oriented services

PROJECT NO.: V0109VZ (continued)

will result in the better ordering of priority needs and will focus on procedures for utilizing employment information, exploring alternative work experience activities in the community, and providing placement in next-step services for all students.

PROJECT NO.: V0132VZ

PROPOSED BEGINNING AND ENDING DATES: June 15, 1974 - August 15, 1975

PROJECT TITLE: DISCOVER: A Computer-Based Career Guidance and Counselor-Administrative Support System

INVESTIGATOR AND INSTITUTIONS: Jo Ann Harris
Northern Illinois University
Dekalb, Illinois 60115

OBJECTIVES:

1. To design an interactive, computer-based guidance system which facilitates the stages of an indicidual's career development.

2. To design an interactive counselor-support system which will relieve the counselor of information retrieval and processing functions.

3. To design an interactive administrative system for use in educational settings.

4. To provide a package of support services and materials which will faciliate the optimum use of the system.

PROCEDURES:

Computer-based guidance systems is already well into development and can be completed and ready for nationwide distribution to schools and other institutions by spring, 1976. Only the budget for the guidance half of the development is being funded here. This project provides an alternative and comprehensive delivery system for sequential, developmental career guidance for individuals from grade 7-12.

END PRODUCTS:

A computer-based system that will serve students, counselors, and administrators in the educational setting by making maximum use of common data files, softwares, and terminal equipment. The system will be cost-feasible and transportable.

PROJECT NO.: VO126VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Supportive Vocational Education Thrusts in Career Development Delivery System, Pre-Postsecondary Career Development, and 5-Year Follow-up System

INVESTIGATOR AND INSTITUTION: Byrl R. Shoemaker
Ohio State Dept. of Education
Columbus, Ohio 43215

OBJECTIVES:

1. To monitor and manage a continuing model of Statewide Delivery System of Career Education in adaptive curriculum development work for incorporating into every career education site in Ohio new techniques and materials emerging from various state and national career education efforts.

2. To expand a pre-postsecondary program model of instruction in the fields of Business Administration, Engineering, Health Occupations and Social Science for high school students which will be compatible with high school graduation and provide experiences related to postsecondary education toward achievement of a para-professional or professional goal.

3. To study feasibility of a 5-year follow-up of vocational education graduates through utilization of Social Security data and income tax data.

PROCEDURES:

Activities are to complete the staffing of the Career Development Service; to extend pre-post secondary instruction to additional pre-postsecondary students and sites; and to study the feasibility and make pilot run of follow-up information with the Social Security Administration and the Internal Revenue Service. Evaluation will be conducted by a third party.

END PRODUCTS:

A planned program budgeting, and management system will be developed for implementing Career Development in the grades K-10; a new experential

PROJECT NO.: V0126VZ (continued)

methodology will be developed for pre-postsecondary students in grades 11 and 12; and a low-cost computerized 5-year follow-up system will be produced.

PROJECT NO.: V0142VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - September 25, 1975

PROJECT TITLE: Data Base Establishment and Model Development for a Coordinated Comprehensive Placement System

INVESTIGATOR AND INSTITUTION: Merle E. Strong
Board of Regents of the University
of Wisconsin System
Madison, Wisconsin 53706

OBJECTIVES:

1. To generate a "data base" for future planning and development by identifying the present level of placement; involvement of various agencies; guidance activities or services; new services not currently provided; existing or new "agencies"; and the "cost" associated with providing or using placement and related guidance services.

2. To develop a model for the "coordinated, comprehensive placement system" by interpreting the research data generated by the study, developing and testing a prototype model to provide actual experience which will be utilized in final model development.

PROCEDURES:

Two major phases: A research phase, involving surveys of literature and other programs and activities of a related nature, to establish the necessary data base for further planning and a development phase, involving necessary interpretation of the data, the generation of the model and the field testing of the "prototype" model under actual conditions. To aid in accomplishing these tasks, a jury of experts will be involved in decision making relative to the framework of the placement system. In addition, an advisory committee will be formed to assist the project staff in the research study and evaluation of the project.

END PRODUCTS:

Although the ultimate goal of this project is the perfection of a model for a coordinated, comprehensive placement system to serve high school through adult-age persons, a number of intermediate results will accrue as a result of the project activities. These include:

PROJECT NO.: V0142VZ (continued)

1. The information generated in this study will be synthesized into formal reports for use by others.

2. The experience and results of the test exercises used in the model development will be available for use by others.

3. A final report of all project activities will be available to others for use in implementation of the model.

4. The model along with appropriate guidelines for implementation will be described in a formal report for publication.

PROJECT NO.: V0244VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1975 - December 25, 1975

PROJECT TITLE: A Needs Based Vocational Guidance Program

INVESTIGATOR AND INSTITUTION: James E. Bottoms
Georgia State Department of Education
Atlanta, Georgia 30334

OBJECTIVES:

1. To develop the capacity to plan educational/guidance programs based on student needs.

2. To plan and design a guidance delivery system that will enable schools to meet the career development needs in the broad sense and vocational guidance needs in particular of their total student population.

3. To design and develop training packages that will enable the local guidance team to acquire the appropriate competencies.

4. To try out the total delivery system in Georgia school systems that have a student body comparable to a variety of schools across the nation.

5. To emphasize in all aspects of this emerging program the facilitation of career/vocational planning for students at grades seven through twelve.

PROCEDURES:

The project will be developed in six phases -- start-up, needs assessment, program planning and development, field testing and piloting, preparation of staff, and implementation. It is anticipated that the first five phases will require the initial eighteen project months to develop, test the concept, and validate the materials. The implementation phase will actually occur after this grant has expired.

END PRODUCTS:

1. A published Kit, enabling individual school systems to operate a total career/vocational guidance program, will be available for national distribution.

PROJECT NO.: V0244VZ (continued)

2. A team approach to vocational guidance will be developed and tested.

3. Participating schools will be able to demonstrate full planning competencies.

4. A special training package will be developed that would apply toward preparation of counselors and other educational personnel.

5. An evaluation design will be produced by consolidating the best programs of the existing systems with project developed processes.

PROJECT NO.: V0272VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Validation of Assessment Measures for Use With Disadvantaged Enrollees in Occupational Training Programs

INVESTIGATOR AND INSTITUTION: Benjamin Shimberg
Educational Testing Service
Princeton, New Jersey 08540

OBJECTIVES:

1. To assess the capabilities, interests, attitudes, and motivations of students with respect to themselves and to their job finding and job holding skills.

2. To devise measures to assess short and long term behavioral outcomes that can be used to define program effectiveness.

PROCEDURES:

The ETS staff and Opportunities Industrialization Centers of America (OIC) will collaborate in the preparation of a variety of guides and manuals relating to the administration, scoring, and interpretation of results obtained from the use of various instruments. As its contribution to the project, OIC will provide existing staff to administer the tests and to collect followup data. The group to be tested and followed up longitudinally will be enrollees in the OIC program. Responses to the criterion questionnaires will be coded by trained analysts and all data will be key punched and verified for analysis by computer. The questionnaire will be factor analyzed to ascertain whether the dimensions that have been identified in previous studies hold up and criterion factor scores will be computed for the "best" of the criterion dimensions. The analysis will also provide information about the relationship between short term criteria and longer term behavioral outcomes, in order to ascertain how these criteria can be utilized most effectively for guidance, program evaluation, and research purposes.

END PRODUCTS:

The results of this project will benefit the vocational education community in at least three ways:

PROJECT NO.: V0272VZ (continued)

1. It will provide guidance personnel, working in occupational training institutions, with a set of validated measures that can be used for assessing cognitive skills, interests, attitudes, and motivations dealing with a variety of job oriented constructs.

2. It will provide program administrators with a suitable method of evaluating the various instructional components of their programs for making changes where trainee behavior inadequacies are revealed during the course of the program.

3. It will make available to occupational educators various criterion tools which can be used to assess more comprehensive outcomes of occupational programs.

PROJECT NO.: V0299VZ

PROPOSED BEGINNING AND ENDING DATES: June 25, 1974 - December 25, 1975

PROJECT TITLE: Operational Blueprint for Health Careers Education and Training Program

INVESTIGATOR AND INSTITUTION: Patricia Tompkins
D.C. Public Schools, Department of Career Development
Washington, D.C.

OBJECTIVES:

1. To develop an operational blueprint for the implementation of a comprehensive multi-level Health Career Education and Training Program for the District of Columbia.

2. To organize a cooperative body to plan, coordinate, evaluate and monitor health occupations education and training in the District of Columbia.

PROCEDURES:

Collect data of current and projected health service and health manpower needs in order to develop a data bank of existing and potential training programs in the area of health occupations. Compile a profile of the student population to be served for career counseling and guidance. Finally the implementation of a Health Careers Education and Training Program in the D.C. Public Schools.

END PRODUCTS:

On completion of this project it is expected that the primary outcome will be an Operational Blueprint for the implementation of a comprehensive Health Careers Education and Training Program. A sequential program which recruits the potential student in the middle school, commences at the secondary level, continues at the post-secondary level and endorses continued education at the baccalaureate and higher level. The primary outcome is facilitated by the following terminal expectations:

PROJECT NO.: V0299VZ (continued)

1. Organization of selected health services and health manpower resources into a cooperative body for planning, coordinating and monitoring health career education and training programs in the area.

2. Completion of a data store continuing current and projected health services and health manpower needs.

3. Specification of the characteristics, style and needs of the learner population from which strategies for appropriate supportive and instructional services can be developed.

PROJECT NO.: V0337VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Guidance, Counseling, Placement and Followup Services Project

INVESTIGATOR AND INSTITUTION: George H. Washburn
The Independent School District of
Boise City
Boise, Idaho 83702

OBJECTIVES:

1. To develop a Career and Educational Information Center.

2. To utilize the center by involving students, teachers and counselors in career-related activities.

3. To develop supplementary and enriching materials for the majority of school disciplines which will tie the subject area with career investigations.

4. To develop a placement service component which can involve all students in the target schools.

5. To develop a follow-up component which will point up the needs in career education and the entire educational program.

PROCEDURES:

The establishment of a Career and Educational Information Center, supervised by the district's Career Development Specialist, to promote a major reemphasis in the role of the secondary counselor in the Boise Public Schools. This center would be portable in nature so that it could serve the needs of several buildings. It would contain audiovisual equipment, audiovisual materials, printed materials, work space, and research help. To help insure the Career Center's usability in the classroom situation, counselors, teachers and specialists will also develop curriculum activities which will correlate these materials and the subject matter being studied in all areas of the curriculum. The primary intents of the placement portion of this project is to place students and school learners in jobs of occupational significance and to involve both public and private agencies in a cooperative effort with the schools designed to involve the total community in the placement of students. The follow-up program will consist of written questionnaires,

PROJECT NO.: V0337VZ (continued)

phone questionnaires and interviews of students and former students on a periodic basis.

END PRODUCTS:

The Career and Educational Information Center will be set up and utilized in two high schools on a monthly rotating basis. The center will serve the needs of each of these schools plus the four feeder junior high schools upon request.

VII. Abstracts of Funded Projects

E. Manpower Information and Systems

(Abstracts for this priority area follow this sub-title page in the order of their assigned project numbers.)

PROJECT NO.: V0015VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: An Employment Agency Model for Providing Job Information to Rural Disadvantaged Populations

INVESTIGATOR AND INSTITUTION: Harold R. Bonner
Prairie View A & M University
Prairie View, Texas 77445

OBJECTIVES:

1. To identify both private and public employment agencies that exist within the target area.

2. To determine the types of services rendered by the employment agencies.

3. To survey potential users of employment agencies to determine factors leading to non-use of available employment agencies.

4. To identify the participation rate of the target population that is served by both private and public employment agencies.

5. To identify and analyze those factors which impede or prevent vocationally trained individuals from entering in employment fields for which they have been trained.

PROCEDURES:

In conducting this study, the following procedures will be used:

1. Guidelines for the survey of job employment agencies will be developed.
2. A survey instrument will be developed to be used in obtaining required information.
3. The selection of a survey team from lay members of the communities to visit and obtain the needed employment information from the target population.

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PROJECT NO.: V0015VZ (continued)

END PRODUCTS:

It is anticipated that the benefits from this study will be as follows:

1. Employment agencies in the target area will be identified and classified as to type, function, effectiveness and types of services provided.
2. Problems affecting the employment of vocationally trained disadvantaged groups will be identified.
3. An effective tool for placing disadvantaged groups in employment will be accomplished.
4. Coordination between public education and manpower agencies will be improved.
5. Data will be collected and analyzed requisite to the development and testing of an employment model which will assist unemployed vocationally trained individuals in obtaining jobs and thus provide an employment agency model for use by local, state, and national agencies.

PROJECT NO.: V0043VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: A Research Project for a Texas Supply/Demand Information System for Vocational Education

INVESTIGATOR AND INSTITUTION: Eric Moody
Governor's Office of Information
Services (H & H R Division)
Austin, Texas 78711

OBJECTIVES:

1. To complete the research, development and the resulting implementation of Phase II (Statewide Supply/Demand Match) and Phase III (Substate Supply/Demand Match) of a proposed five phase Information System by:

a. Broadening the occupational categories to include emerging new occupations and the expansion of current occupations.

b. Relating to national and Texas Input/Output Economic Models to make the Supply/Demand Projections more sensitive to economic change.

c. Utilizing special Occupations Studies, presently being conducted in Texas, e.g. Health, Agri-Business and others to augment Supply/Demand Projections

PROCEDURES:

The Supply/Demand Model is designed to utilize data elements from the Texas Education Agencies' Educational Management and Information System (EMIS) and the vocational education student "follow-up" program presently implemented. Planning and research will continue on how to integrate information from the other EMIS category subsystem, as they relate to Vocational Education (facilities, financial, staff, student and instructional program), into the Supply/Demand model for both strategic and local planning.

PROJECT NO.: V0043VZ (continued)

END PRODUCTS:

The Texas Supply/Demand Information System for Vocational Education will provide computerized outputs on:

(a) Statewide current and projected estimates of demand by occupation.

(b) Supply/Demand Matching of substate data (state planning regions and county grouping of 250,000 population or more).

(c) Supply Data will be available on a county basis.

PROJECT NO.: V0066VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: A State Manpower/Curriculum Management System

INVESTIGATOR AND INSTITUTION: Donald M. Giles
Oregon State Department of Education
Salem, Oregon 97310

OBJECTIVES:

1. To provide for the development, refinement and use of manpower data in program planning, curriculum development and guidance and counseling.

2. To create a data base through occupational task/competency/instructional analysis for purposes of program planning, curriculum development and guidance.

3. To provide models for utilization of data in curriculum development with emphasis on individualized instruction, work experience, and student assessment.

PROCEDURES:

Using manpower analyses of major occupational areas underway, this project will concentrate on identification of priority occupational areas for task analysis and curriculum development activities,

In order to achieve these goals, at least three types of data are necessary: (1) detailed listing of occupations; (2) employment data and projected needs and (3) output data from existing training programs. A computerized system will be developed to organize and disseminate this data. A primary consideration in the development of curriculum materials for career education is the availability of valid information about the tasks performed in careers. This information will be obtained by obtaining previously completed task/competency analyses of occupations or, if these are not available, by creating analyses. An allied benefit of this collection of data will be its implementation in student career counseling activities.

END PRODUCTS:

This project will provide applied research activities resulting in the development of the following:

PROJECT NO.: V0066VZ (continued)

1. Manpower data for program planning, curriculum development and guidance and counseling.

2. An effective guidance and counseling component to be an integral part of all vocational education programs.

3. Improved instruction in all vocational programs through the development and use of curriculum materials based on manpower and occupational analysis with emphasis being placed on development of individualization of instruction.

PROJECT NO.: V0071VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Forecasting Model - Statewide Manpower Projections for Vocational Education

INVESTIGATOR AND INSTITUTION: Frank Henry Wimer
Coordinating Council for Occupational Education
Olympia, Washington 98504

OBJECTIVES:

1. Research, develop, and document the model which will translate Federal and State forecasting information into a form usable by local school districts and community college districts.

2. Field test the model with four secondary schools, two vocational institutes, and six community colleges.

3. Evaluate the validity of the model and incorporate necessary changes to validate and finalize the model.

4. Formally document the validated model and procedures so as to provide for transportability to other schools within the State, as well as outside the State.

5. Prepare the plans for the participating schools and community colleges based on the information provided by the forecasting model.

6. Orient and train the necessary school administrators on the effective use of this forecasting model as a managerial tool to improve their knowledge and skills needed to improve the planning process within their respective districts.

PROCEDURES:

Sources and types of forecast information currently available will be identified and evaluated by the various user groups, e.g., secondary and postsecondary institutions, to determine their utility and extent of use in enrollment, occupational program class enrollment forecasting along with impact of such enrollments and manpower requiements on facility and personnel requirements. Building upon tested forecast techniques, a model will be developed for translating aggregate manpower projections into requirements at the local level, includ-

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PROJECT NO.: CC71VZ (continued)

ing techniques for using such local manpower forecast in guidance and counseling, facility construction, program planning, curriculum development and other xxxxx related areas of administration. Following a field testing of the model, the personnel in the user institutions will be trained in how to use the manpower information in administering their particular program.

END PRODUCTS:

A forecasting model and documented procedure will be developed for (1) identifying existing forecasting sources and information and (2) modifying this information so that it can be usable at the local levels to support vocational education planning requirements.

PROJECT NO.: V0072VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - May 31, 1975

PROJECT TITLE: Vocational Management Information Interface Study

INVESTIGATOR AND INSTITUTION: Albert D. Link
South Carolina State Dept. of Education
Columbia, South Carolina 29201

OBJECTIVES:

1. To pilot an automated student accounting model to determine the cost feasibility of expanding a vocational education data base.

2. To pilot system-to-system interface through program conventions.

3. To pilot a management information retrieval and dissemination process tailored to the needs of vocational education decision makers.

4. To pilot systems capable of producing auditable enrollment, completion, and student follow-up information.

5. To disseminate the findings of the study in the southeast region.

PROCEDURES:

This study is built around three phases which relate to the school schedule rather than funding cycles. The major products of Phase I include the development of software,collection forms, implementation design specification and related outcomes. Phase II is a detailed pilot study of the implementation and major data collection phases of the project. The major products of phase II include a detailed analysis of the procedures and designs proposed for collecting student data, school transaction files and final student accounting files. The final phase, phase III, includes products such as the final report, cost analysis, follow-up reports, final evaluation reports, and an internal management report.

END PRODUCTS:

The major products of the study will include:

(1) manpower projections to be disseminated to vocational education program planners and other users.

PROJECT NO.: V0072VZ (continued)

(2) job requirements matched to training skills,

(3) a broad base of information for allowing the transmittal of manpower forecasts directly to curriculum and program planners,

(4) the identification of the needs of disadvantaged and handicapped students vis-a-vis vocational education programs,

(5) procedures for information interface between previously identified modules and curriculum dissemination methodology to be used by vocational education program planners and operators.

PROJECT NO.: V0099VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - August 31, 1975

PROJECT TITLE: A "Hands-On" Information System for Vocational Education Planning: Applications Based on Changing Energy Resource Availability and Pricing

INVESTIGATOR AND INSTITUTION: David W. Stevens
University of Missouri-Columbia
Columbia, Missouri 65201

OBJECTIVES:

1. To bring the current state of the art of projecting employment levels and composition to the attention of administrators of vocational education programs.

2. To describe the data requirements for accomplishing specific types of projections and to relate currently available data to these requirements.

3. To document the development of an information system that is responsive to changing circumstances.

4. To host a national conference in June 1975 to disseminate the results of our research activity.

PROCEDURES:

The first two objectives stated above will be accomplished at a seminar for the Missouri State Department of Education. A paper will be prepared, after an evaluation of a synthesis of methodological and data issues, for distribution to administrative planners. The third objective will be achieved by refining the current Missouri Occupational Training Information System (MOTIS) to reflect labor market curcumstances that are not incorporated in any current information system. While the data used will focus on Missouri impacts, the method will be replicable and will be of obvious national significance. Hosting a national conference, at which time the accomplishments of objectives 1 2, and 3 will be disseminated, finalizes this project.

PROJECT NO.: V0099VZ (continued)

END PRODUCTS:

This research will provide information concerning mobility and substitution potentials among various occupations making the vocational education planners' decisions less difficult regarding future demands for and supplies of persons trained in various skills. While the research will establish occupational mobility and substitutability, relationships among a comprehensive set of occupations, special emphasis will be given to the analysis of energy related occupations.

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PROJECT NO.: V0101VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: The Comparative Efficacy of Selected Manpower Demand Projection Techniques on Diversified Populations.

INVESTIGATOR AND INSTITUTION: J. Brown Morton
Oklahoma State Department of
Vocational and Technical Education
Stillwater, Oklahoma 74074

OBJECTIVES:

To provide a guide to State and local administrators, planners, evaluators, researchers, and other user groups for selecting the most accurate manpower demand projection technique to use on diversified populations with budgeted costs.

PROCEDURES:

Seventy seven counties in Oklahoma will be stratified into six population levels. From this stratified population groups, six counties will be selected randomly for comparing the efficacy of selected manpower demand projection techniques in making one, three, and five year demand projections for selected occupations. The Bureau of Labor Statistics matrix, with modifications for small populations, and the modified Area Skills Survey technique will be tested by comparing the demand projections, using the two techniques, with the results of a comprehensive survey of the population one year later. Calculations will be made for each technique to obtain percentage of error for each population group and the detailed expenditure. Adequate statistical tests will be made to verify each step in the process. An advisory committee will be established to give guidance and direction to the project, including the modifications of techniques to be tested, procedures for applying the techniques, statistical treatment of data, and a supply and demand system to be used.

END PRODUCTS:

With information from this study, a state will be able to select a manpower demand projection technique which best meets their need and develop a supply demand system basic to administering a vocational education program. Sub-state, county and school districts will be provided with information on which techniques are most accurate, cost factors considered.

PROJECT NO.: V0116VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Development and Implementation of a Model for a Regional Information System for Vocational Technical Education

INVESTIGATOR AND INSTITUTION: Garry R. Bice
The University of Tennessee
Knoxville, Tennessee 37916

OBJECTIVES:

1. To develop a model for a regional information system for vocational-technical education.

2. To implement a regional information system for vocational-technical education.

3. To determine the feasibility of regional research and development efforts for information systems in terms of:

   a. Sharing
   b. Range and scope of information requests
   c. Problems encountered in tracking migration of trained manpower.

PROCEDURES:

Four primary phases of operation will be utilized to develop the total project. Phase I will include determining specific needs and interests to modify existing files and computer programs. This will be developed in a way that additional information may be added or data updated at anytime it becomes available. Phase II will consist of providing inservice training to potential users. Phase III will be the actual operation of the system, providing services to user groups. Phase IV will consist of evaluating the value of the total system. Mailed questionnaire and personal interview techniques will be used.

PROJECT NO.: V0116VZ (continued)

END PRODUCTS:

This project should make available the following kinds of information to educational planners and instructional personnel:

1. Manpower supply information.
2. Manpower demand information.
3. Selected economic trend data.
4. Occupational guidance information.
5. Curriculum information.
6. Computer search capability.
7. Career planning materials.

In addition, the project will determine the relative feasibility of consolidating information sources in one location, insuring more complete uses of available information for decision making processes.

PROJECT NO.: V0127VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - March 31, 1975

PROJECT TITLE: Choctaw Manpower/Demographic Survey Project.

INVESTIGATOR AND INSTITUTION: Phillip Martin
Mississippi Band of Choctaw Indiana
Philadelphia, Mississippi 39350

OBJECTIVES:

1. To collect and analyze basic manpower, labor force, and demographic data on the Choctaw population.

2. To establish a basic household/family information data base to serve as a basis for the consolidation of all existing program and agency records maintained by tribal, USPHS and BIA offices on the Choctaw reservations.

PROCEDURES:

All data collected via this survey will be subjected to extensive analysis and compared with previous data to indicate current demographic trends in the population, as they affect manpower planning. The survey instrument and analysis will be structured so as to permit computer print outs of basic manpower data, such as:

1. The size of the Choctow labor force
2. The location of the Choctow labor force by community and concentration
3. The composition of the Choctow labor force by age and sex
4. The characteristics of the Choctow labor force in terms of mobility, educational level, prior work experience, current employment status, occupational, and educational aspirations, disabilities, and willingness to work off the reservation.

Survey terms used to collect household/family information data have considerable familiarity with the reservation so that performance will be economical and reliable.

PROJECT NO.: V0127VZ (continued)

END PRODUCTS:

The survey, for which this project would produce information not now available, will:

A. Provide a basis for improving manpower planning and projections for industrial and (vocational) educational uses at the state, tribal, and federal levels.

B. Provide a basis for matching industrial labor requirements with the skill of prospective workers from the Choctow population.

C. Provide data required to interface vocational, educational, and manpower training projects with reservation area economic and industrial development efforts.

PROJECT NO.: V0152VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - August 31, 1975

PROJECT TITLE: Implications of Changes in Occupational Characteristics in the Next Decade for Planning in Vocational Education

INVESTIGATOR AND INSTITUTION: Leonard A. Lecht
National Planning Association
Washington, D.C. 20009

OBJECTIVES:

1. To devise a series of indicators to provide an overview of the expected changes in the characteristics of occupations in the next decade.

2. To assess the implications of the anticipated changes for priorities in planning in vocational education.

3. To present the quantitative findings, together with an analysis of the implications of the data for vocational educators and disseminate the findings.

PROCEDURES:

The basic approach in the study will be to develop and interpret the significance of three types of indicators to supply a basis for assessing the relationship between changes in occupational characteristics and planning in vocational education. The indicators are:

1. occupational characteristics profile
2. career opportunity priority indicators
3. vocational enrollment-job training indicators

The three indicators would be presented on a national basis for 1980 and 1985, and for a recent base year. The study would also explore opportunities for preparing similar indicators for individual states. To encourage the dissemination of the finds, it is proposed that three two-day conferences be held for persons involved in national planning in vocational education and an audience made up of state and local personnel.

PROJECT NO.: V0152VZ (continued)

END PRODUCTS:

The primary end product of the study would be the development and analysis of occupational characteristics profiles for 1980 and 1985 in approximately 100 occupations. These would be the occupations which are expected to provide the bulk of the employment in the next decade for young persons with less than a full college education. The distinguishing feature of the study would be the creation of a system of occupational projections joining job opening data with data relating to changes in earnings, in educational attainment levels, and in the anticipated employment opportunities for nonwhites and women.

PROJECT NO.: V0158VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Manpower Information Research Training Project

INVESTIGATOR AND INSTITUTION: Neal Edward Vivian
The Ohio State University
Columbus, Ohio 43210

OBJECTIVES:

1. To plan, coordinate, and operate a three-day training program which will upgrade the competencies of a selected number of vocational researchers in the area of manpower research and its implication for planning programs for the state, local, and national levels.

PROCEDURES:

The increased emphasis on manpower research in vocational education has served to underscore the immediate need for greater numbers of vocational educators with stronger backgrounds in statistics, research, and particularly those skills involved in making accurate manpower projections, translating manpower forecasts into program requirements, and the use of available job labor and demographic information related to the needs of the federal, state, and local levels. This three - day special research training program will be held as pre-session to the 1974 American Vocational Association convention in New Orleans, Louisiana.

END PRODUCTS:

As a result of completing this program, the participants will not only be benefiting directly, but it is intended that by working in their respective state or local agencies that they can pass the benefits of their training on to their superiors and colleagues. Some of the results should include:

A. The expansion of public participation.

B. The development by vocational educators of a systematic method for identifying, designing, testing, and using models for forecasting manpower requirements in states or local communities.

C. The improved ability to modify and develop vocational/technical education programs based upon their forecasted manpower requirements.

D. The providing of in-service training for vocational/technical educators to update the skills needed by them in manpower forecasting and its application to vocational/technical education.

PROJECT NO.. V0187VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Nebraska Vocational Information System

INVESTIGATOR AND INSTITUTION: To be Named
Nebraska Department of Education
Lincoln, Nebraska 68508

OBJECTIVES:

1. To develop an information system for the Nebraska Department of Education's Division of Vocational Education which would become an integral part of the data gathering activities of the State Department of Education.

2. To develop a model to be used by vocational education administrators for incorporating the data system into the administrative function.

PROCEDURES:

The project activities are divided into the following phases:

1. Assessment
2. Priority Determination
3. Design

In the Assessment Phase, a review will be made of other information systems as well as an analysis of both data gathering and reporting instruments. A selection will be made of data elements (e.g., student, teacher, program, school, cost) based upon the recommendation of the Division of Vocational Education and its needs and an Advisory Committee established to provide counsel for the project. In the Priority Determination Phase, a determination will be made of elements necessary for the vocational information system as well as instrument acceptability, data availability, etc. This phase will be followed by a Design Phase in which instruments will be developed or adapted according to element priorities along with the development of a computer program, local capability to report data elements, and administrative capability to use data elements, the latter two activities requiring a training program. Also included in this phase of the activity will be to (1) develop

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PROJECT NO.: V0137VZ (continued)

(1)coordination contacts (data gathering from other agencies), (2) computer printout format, (3) staff evaluation instrument, (4) advisory committee evaluation instruments, (5) local school evaluation instrument, and (6) data gathering strategy or schedule - both internal and external.

END PRODUCTS:

The expected results of this project is the design of a vocational education information system supportive to the administrative function of the Nebraska Department of Education, particularly the Division of Vocational Education. Once the system is tested and implemented, it will provide the capability for adjusting administrative staff to new functions of improved vocational education planning and administration and provide input to national vocational data gathering efforts.

PROJECT NO.: V0206VZ

PROPOSED BEGINNING AND ENDING DATES: June 10, 1974 - December 10, 1975

PROJECT TITLE: Developing a System for Comprehensive Vocational Education Planning for Local Schools

INVESTIGATOR AND INSTITUTION: W. A. Rumbaugh
Kansas State Board of Education
Topeka, Kansas 66612

OBJECTIVES:

1. To develop Vocational programs and curriculum.
2. To determine training needs through manpower studies and relate to guidance activities.
3. To disseminate information on innovative vocational programs.
4. To assists schools in organizing co-op work experience programs.
5. To develop learning package and individualized instructional materials.

PROCEDURES:

During the planning phase the state agency will specifically define the major objectives of systems, prepare an overall system design, outline reporting requirements, and determine the schedule and approximate cost and implementation of the system design. The system design will include components for guidance counselor activities, curriculum development and implementation and innovative type vocational programs. After top management review and approval of the systems plan, the systems development phase can begin.

END PRODUCTS:

As change efforts must always be focused on improving what the teacher does and how he does what he does, this projects' primary focus is on developing local vocational-technical programs which are continuously innovative and self-remewing. This planning and information system will be actual development of an innovative comprehensive state and local planning for Vocational Education programs serving all Kansans.

PROJECT NO.: V0212VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Comprehensive Instructional Management System for Occupational Education in New York State.

INVESTIGATOR AND INSTITUTION: Robert S. Seckendorf
New York State Education Department
Albany, New York 12224

OBJECTIVES:

1. To design and demonstrate the effectiveness of an Instructional Support Subsystem (ISS) for Occupational Education.

2. To determine the empirical or institutional feasibility of implementing the Targeting Subsystem.

PROCEDURES:

The ISS and Targeting Subsystem have been formulated to (a) produce information designed to improve vocational education, and (b) produce products that are designed to improve and extend existing vocational education practices. The ISS via the use of a closed - loop feedback system manages instruction and the allocation of resources (including manpower), by detecting discrepancies between planned and actual performance by students and allows for immediate corrective action with respect to instructional resources being allocated to and the instructional activities being implemented in the classroom. A targeting system is one of a hierarchy of systems required to support the effective delivery of superior occupational education to the residents of New York State. The Targeting Subsystem replaces the major function of present follow-up surveys by having computers carry out long - term analyses concerning whether occupational education is effective in equipping students to advance themselves both in terms of real income and promotions.

END PRODUCTS:

Those special proposed features of an ISS for occupational education should have obvious pay-offs for training more people for the world of work, reducing unemployment among the disadvantaged, improving the economic development of the State of New York and reducing the dependency of adults on various programs of social welfare. The implementation of the Targeting

Subsystem will result in the following:

1. Measures of effectiveness by occupational education program for each region and for the State as a whole.

2. A highly specific set of information which may be used for a variety of purposes ranging from making decisions concerning optimal sites for new educational facilities to providing information to students so that they may be better equipped to make informed vocational choices.

PROJECT NO.: V0218VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: A Study of Job Demands and Curriculum Development in Agricultural Training Related to the Muskegon County Waste Water Management System.

INVESTIGATOR AND INSTITUTION: Harold S. Fisher
Muskegon Area Intermediate School District
Muskegon, Michigan 49442

OBJECTIVES:

1. To establish programs in secondary and post secondary vocational-technical agricultural training related to this new method of waste water usage in agricultural production by:

   a. Determining the labor demands for occupations which will result from this new farm system and do a task analysis on each position.

   b. Developing instructional modules and determining their place in either the secondary or postsecondary structure.

   c. Implementing an articulated curriculum with actual programs and gain full approval for State funding.

PROCEDURES:

Through a systematic collection of data, a study of all aspects of job demands, existing and future, created by the installation of the new county wide waste water control system in Muskegon County will be conducted. Competencies studies are underway to do task analysis and identification of training requirements. Data collection instruments and the computer programs will be utilized to the maximum extent when feasible and appropriate. Instructional development and curriculum research will be accomplished by project staff with consultant assistance from Michigan State University. A student awareness program will be created to have students recognize the new program and the job opportunities related to it.

END PRODUCTS:

This project will enable the educational institutions of Michigan and particularly Muskegon County to become the leaders in providing manpower in new technologies in crop and soil management, and other related occupational clusters as they apply to the agricultural management systems within this type of waste treatment.

PROJECT NO.: V0220VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Task Inventory Exchange (TIE)

INVESTIGATOR AND INSTITUTION: Paul E. Schroeder
The Center for Vocational and
Technical Education
Columbus, Ohio 43210

OBJECTIVES:

1. To establish a central repository and clearinghouse for task inventories that are being produced throughout the country in varied occupations.

2. To publish and distribute an initial directory of available occupational task inventories.

3. To search, identify and acquire what additional existing task inventories are available.

4. To compile and publish an expanded (2nd edition) directory noting what inventories exists, their characteristics, and where copies may be obtained.

5. To compile and synthesize the empirical research findings that have been published on the development and use of task inventories.

PROCEDURES:

Print and distribute TIE Clearinghouse service flyer announcing its establishment, including availability of 1st directory and a request for copies of additional task inventories from the field to the clearinghouse. Contract with a local firm to produce microfiche masters of acquired additional inventories. Each new document will be reviewed to identify relevant characteristics to establish descriptive parameters concerning task inventory or associated task data. The availability of the 2nd directory will be announced in Center and USOE publications and newsletters. A program paper will be prepared to synthesize empirical findings on development and use of task inventories.

PROJECT NO.: V0220VZ (continued)

END PRODUCTS:

This project provides needed information to undergird curriculum planning and curriculum development activities, yielding information of utility in developing performance-oriented curricula. It will make available certain job information that may provide one important basis for matching job requirements to the skills of prospective workers. In this applied study, job data required by public, private, and proprietary curriculum developers would become more generally accessible to all sorts of user groups.

PROJECT NO.: V0221VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: A Comparative Study of States Staffing Patterns and Delivery Systems of Vocational Education and their Relative Effectiveness

INVESTIGATOR AND INSTITUTION: Richard W. Whinfield
University of Connecticut
Storrs, Connecticut 06268

OBJECTIVES:

1. To determine the relative effectiveness of vocational education administration through state directed schools, independent area schools, local educational agencies or combinations thereof.

2. To determine the relationship between staffing patterns and delivery systems to the development of high school level, post-high school level and adult level.

3. To determine the relationship of staffing patterns and delivery systems to:
   a. various programs of Vocational Education
   b. various groups to be served (students with special needs, disadvantaged, etc.)
   c. various services provided (teacher education, research, guidance, work study programs, etc.)
   d. coordination with other state, regional and local agencies.

PROCEDURES:

Reports of quantitative measures based primarily on service to students will be collected and comparisons made by computers within, as well as across categories, permitting combinations of various categories to be analyzed. State reports, census data, and manpower data will be compared and reviewed to determine the relative quantity of vocational education by each of the categories. Financial expenditures will be used in the study of the quality of education. With these two measurements (quantity and quality), the states which rank highest will be identified for use in an in-depth study. There will be a further analysis based upon staffing patterns and delivery systems as established using categories developed upon analysis of state plans. A series of written reports will be generated identifying characteristics of administrative structure which appear to be related to success.

PROJECT NO.: V0221VZ (continued)

END PRODUCT:

This study will provide new insight into the details of organization and processes of the various state system of vocational education. Relationships will be established between existing vocational education organizational structures and success of their programs. As a consequence, the study will provide a categorization of all state's staffing patterns and delivery systems based on the 1974 state plan, and projected changes over given years based on a five-year plan submitted with the 1974 state plan as well as a general review of the effectiveness of each state based upon annual reports of 1968 and 1963. An in-depth analysis will be provided on the administrative structure of six to ten states and a comparison made of the staffing patterns and delivery systems with respect to the quality and quantity of vocational education offerings. Common elements will be identified which related to successful services as well unique administrative elements which lead to singular or multiple success.

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PROJECT NO.: VC253VL

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Multifarious, Student-Based, Management-Oriented Information System

INVESTIGATOR AND INSTITUTION: Ronald D. McCage
Illinois State Board of Vocational
Education and Rehabilitation
Springfield, Illinois 62706

OBJECTIVES:

1. To operationalize a student data base, using modern optical scanning technology at the student level, that will facilitate the reporting, planning and regulatory requirements of the Illinois Division of Vocational and Technical Education.

2. To operationalize a manpower demand data base including demand projections to facilitating matching curriculum content with skill requirements of a given job or job cluster, and to allow assessment of qualitative changes in curriculum generated by productivity changes.

PROCEDURES:

The Illinois Multifarious, Student-Based, Management-Oriented Information System has been designed to build upon five component areas (student supply data, manpower demand data, student follow-up data, on-site evaluation data, and cost analysis data) currently under varying stages of development. These areas, when interfaced with the placement service component and the Area Planning Council, will provide a single, viable, interactive system that will provide information for rational decision-making at the state and local level. Concentration will be centered on completing the development of the student and manpower data bases and pilot-testing these components in concert with the other components as a total system in selected counties of the State to determine their implications for Statewide implementation at a later date. All informational gathering activities will be automated to the extent possible to make maximum utilization of a computer network to facilitate the collection, storage, and retrieval of

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PROJECT NO.: V0253VZ (continued)

information and provide immediate feedback of the information to state and local planners as well as to the participating schools.

END PRODUCTS:

When the seven informational gathering activities are organized into a single, interactive system, each of which supplements and compliments the other, vocational administrators, planners, evaluators, and others will have immediate access to a body of data relevant to extending the range and quality of vocational education throughout the State. This model system can be used by other states in pursuing similar efforts as well as for regional or national purposes where interstate coordination is desired.

The Student Supply Data, for example, will be of sufficient detail so as to determine the projected program completers with respect to those entering and those who may complete a program but not be interested in employment. The Manpower Demand Data base will provide the necessary elements and methodology for projecting employment with a high degree of accuracy and for interfacing student supply with manpower demand. The other data bases will likewise contain elements for analyzing the various dimensions of vocational education which are central to training youth and adults for existing and emerging job skill needs.

PROJECT NO.: V0304VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: Development of a Management Information System of the Puerto Rico Research, Planning, Evaluation, Statistics and Report Coordinating Unit

INVESTIGATOR AND INSTITUTION: Vidal Velez Serras
Commonwealth Department of Education
Hato Rey, Puerto Rico 00919

OBJECTIVES:

1. To analyze and evaluate the planning, programming, and evaluation functions of the VTE program to determine what occupational demand and supply data is required for the accomplishment of these functions.

2. To make a critical survey of existing sources of data on occupational demand collected, tabulated, interpreted and analyzed by the agencies of the Government of Puerto Rico.

3. To design a methodology for collection, tabulation, and analysis of occupational demand data and a methodology to project the occupational supply data within Puerto Rico.

4. To develop the methodology of the follow-up surveys among recent graduates to improve the response to the questionnaire, and to adapt the procedures for computerization.

5. To design, and develop the required computer program documentation.

PROCEDURES:

This project intends to design and establish a Vocational Education Management Information System that will quantify as precisely as possible the number of jobs available in different economic sectors. Once the data collection instruments are available for use, the regional information coordinators will be trained intensively in all aspects of data collection. This system will have sub-systems for students basic data file, a manpower forecast basic data file, teachers basic data file and facilities basic data file.

PROJECT NO.: V0304VZ (continued)

END PRODUCTS:

1. Up-to-date information on the manpower requirements in Puerto Rico available for vocational planners.

2. The ability to produce exact figures on enrollment and other vital statistics for the preparation of the State Plan and the Annual Report.

3. A feasible follow-up system that would result in a more precise tool for overall assessment of program effectiveness.

4. A feasible information system that would encompass all education regions of the Commonwealth, thus resulting in better services at the local levels.

PROJECT NO.: V0306VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - November 30, 1975

PROJECT TITLE: The Development of a Basic Vocational Education Information System

INVESTIGATOR AND INSTITUTION: Robert L. Morgan
Center for Occupational Education
North Carolina State University at Raleigh
Raleigh, North Carolina 27607

OBJECTIVES:

To produce a set of information requirement specifications at the elementary-secondary, postsecondary, and adult levels for a vocational education information system. Specifically, the objectives are to:

1. Identify a set of informational elements for potential inclusion in a standardized minimal requirements informational system for use in vocational education planning and evaluation.

2. Analyze the informational needs of selected user groups and determine the hierarchical information requirements.

PROCEDURES:

A preliminary list of informational elements will be developed through the content analysis of a body of relevant literature. After the initial list has been developed and a functional analysis methodology employed to ensure the comprehensiveness of the element list developed, it will be reviewed by consultants who have had experience in measurement and information system development with respect to exhaustiveness, clarity of definition, appropriate level of aggregation, overlapping or redundant elements, data availability, relevancy, and preferred method of collection. The recommendations of the consultants will result in a revised list of information elements with their accompanying justification. Representative user groups, e.g., state legislatures, chief state school officers, state advisory councils, state vocational education departments, will then be used to reduce the list of informational items to a manageable list of user justified items in terms of present or projected information needs. A needs assessment inventory will then be administered to key representatives of various user groups to determine the relative importance of the information elements. These data will be analyzed, using the CODAP analysis technique, to determine the (1) mean importance rating for each informational element, (2) frequency distribution of responses across rating categories, and (3) interquartile range of importance ratings for each informational element.

A coefficient of importance will be computed for each informational element and used as the indicator of importance of an informational element for each user group. These data will be used in the development of an overall hierarchy of informational elements, generated by obtaining a weighted sum of coefficients.

END PRODUCTS:

1. A report containing maximal list of information elements for inclusion in an information system for use in vocational education planning and evaluation, including the steps taken in the development of the list and a bibliography on educational planning and information. The expected benefit from this product lies principally in the specifications surrounding the information elements. These specifications will include both the preferred method of collection and the appropriate level of aggregation for elements. This information should assist states with the difficult process of developing compatible data acquisition specifications. In addition, the list of elements will provide a comprehensive catalog of well-specified data rogether with the sources which identified the need for specific data and preferred method of collection.

2. A coefficient of importance matrix for the information elements along with the procedures which generated the matrix. The matrix will provide as its principal function a hierarchical list of information elements which represents the total minimal list of informational requirements for all cooperating groups interested in vocational education information, arranged according to the relative importance of each item. This matrix will provide state agencies with a check list which not only identifies hierarchically the types of information that should be collected but also indicates levels of aggregation for data and methods of collection. It will also assist various agencies in deciding what types of information to supply each other and reduce redundancy in reporting and dissemination.

PROJECT NO.: V0329VZ

PROPOSED BEGINNING AND ENDING DATES: June 1, 1974 - May 31, 1975

PROJECT TITLE: Manpower Program Evaluation Followup

INVESTIGATOR AND INSTITUTION: To Be Named
Alaska Department of Education
Juneau, Alaska 99801

OBJECTIVES:

Develop a followup system which would supplement the manpower and student assessment programs currently in progress and provide the following:

1. Data on which to base adjustments needed in course offering to meet actual demands of the labor market.

2. Data on job difficulties experienced by former vocational students.

3. Insight into counseling and placement needs.

4. Data on type of job placement assistance used by students.

5. Data on the extent to which former students used their training.

6. Data on the number of students who went on to postsecondary vocational training.

7. Data on the extent to which former students quit or changed jobs.

8. Data necessary to fill out U.S. Office of Education end-of-the-year reports.

PROCEDURES:

In order to obtain needed information on graduates and dropouts of vocational programs at the secondary, postsecondary, and adult level which are approved for Federal or State funding, including both general vocational education students as well as MDTA and CETA students, a self-instructional package will be developed to enable local education institutions to conduct followup studies on their own students. The Department of Education will coordinate the local followup studies and provide on-site assistance in setting up the system, including the self-instruction booklets, questionnaires, supplies, postage and telephone expenses requisite to implementing the program. The local followup studies will be validated by the Department of Education by taking a random sample of the graduates of each program and following these graduates' accomplishments, degree of technical proficiencies, etc. at the State level. The two parallel followup systems will be used for one year to provide a cross check and establish data on which to make a decision on whether to localize followup studies. The State validation study will also provide the State Department of Education with a relatively simple followup system and provide an assessment of its capability to administer such a system under varying resource constraints. Initially the followup study will be limited to that segment of vocational education focusing on office occupations. As experience is gained with the students of this program, the followup program will be extended to other sectors of vocational and technical education.

END PRODUCTS:

The validated statewide followup system for vocational education graduates and dropouts will supply the subsystem necessary to complete the vocational education management information system needed at the State and local levels for relevant long range and annual program planning. The data will be used for determining objectives for teacher in-service training and for establishing teacher training in vocational education from the paraprofessional to the master degree levels.